Specifications of 319 Models of Commercial Compressors Published in April Issue of Refrigerated Food News

(Concluded from Page 1, Column 2)

Electric, Icemaster, Ice-O-Matic, Kelvinator, Keokuk, Lipman, Mayflower, Mohawk, Phoenix, Servel, Starr, Universal Cooler, Vilter, Westinghouse, Zerozone.

Included in the specifications information are capacity ratings, which in all but a few cases conform to the A.S.R.E. standard conditions. For those machines which are not rated in conformity with this standard, the conditions under which the manufacturer rates his machine are set forth.

Other data includes compressor specifications, motor make and size, kind and quantity of refrigerant, capacity of liquid receiver, kind and quantity of lubricant, type of condenser, kind and make of controls, type of valves used, and materials employed in the construction of vital parts.

Beer is a timely subject to both the food and refrigeration industries and REFRIGERATED FOOD NEWS, in the April issue, is offering a service to its readers by printing (1) a summary of the general conditions governing the sale of beer in the states in which it has been legalized and (2) a digest of information on the various types of beer-cooling equipment which are now ready for installation in beer-dispensing establishments.

Of special interest to those who sell and those who use commercial refrigeration equipment is the article, "Operation and Interesting Applications of Thermostatic Expansion Valve in Commercial Refrigeration," written by D. D. Wile of the accessories laboratory of Detroit Lubricator Co., considered one of the foremost authorities in this particular field.

Mr. Wile not only outlines the theory of the operation of the thermostatic expansion valve, but attacks practical problems in application and possible service troubles in a way that provides a wealth of information for those who meet up with the thermostatic expansion valve in their work. Five line drawings and a chart are used to illustrate this article.

Other news of developments in the manufacture of refrigeration equipment includes a detailed description of the two new Kelvinator cooling units —one of the continuous fin type, the other a forced convection unit; the first description to be printed of the new "Humid-I-Coiled" display case, in which case and coil are designed as a unit, which is being manufactured by Allied Store Utilities Co. (Hussmann-Ligonier); the announcement by Frick Co., manufacturer of industrial refrigerating machinery, of a new line of methyl chloride units in capacities up to 2 tons; and a story from Servel Sales, Inc., intimating that its line of "Humidraft" forced convection cooling units would be extended.

The April issue also contains a story relative to the new "Cream-O-Matic Jr." counter ice cream freezer manufactured by Grand Rapids Store Equipment Corp., and the first description of the "Therma-Flow" temperature control system for solid CO_2 ice cream cabinets which is being made by FitzGibbon & Crisp, Inc.

Also printed in the issue are up-to-the-minute stories of major news events in the food industry, and a series of articles dealing with interesting and unique applications of refrigeration in the food industry.

Leonard Appoints 87 Dealers in 25 States

DETROIT—Addition of 87 dealers, located in 25 states, and the District of Columbia, to the organization of the Leonard Refrigerator Co., has been announced by R. I. Petrie, general sales manager.

By states, the new dealers are:

California—Wiggins Radio Co., 4481 El Cajon, and Heilbron Electrical Co., both of San Diego; W. W. Thode, Oroville; L. J. Francis, Yuba City; Wynn's Radio Electric Co., 1367 S. Flower St., Los Angeles; L. S. Simmons, Sonoma; Schroeder's, Sacramento; and McKenley-Glans Furniture Co., San Jose.

Colorado—Standard Motor Co., Walsenberg.

Connecticut—Electric Service Co., Inc., 1 Ely Ave., South Norwalk; Mead Stationery Co., Greenwich; McCoy's, Ltd., Hartford, Torrington, and Waterbury; J. C. Herald, Glenbrook; Swenson Brothers, East Woodstock; and Carpenter & Chapman, Bloomfield.

District of Columbia—H. W. Higham, 105 B St., S. E., and Woodward & Lothrop, 11th and F St., N. W., Washington.

Illinois—Eagle Store, Joliet; Losco Electric Co., Chicago Heights; Timmons Furniture Co., Harvey; Morey Roberts, Ottawa; and J. A. Portner, Wheaton.

Indiana—Alexandria Furniture Co., Alexandria; Kasper Furniture Co., 850 Virginia Ave., Indianapolis; Geiger Co., 16th and Capitol Aves., Indianapolis; Maxwell Hardware Co., Martinsville; Sunbeam Electric Co., 712 Ohio St., Terre Haute; and People's Outfitting Co., Indianapolis.

Iowa—Laborde Radio Shop, Perry.

Kentucky—Electric Equipment Co., Ashland; and R. M. Thornberry Piano Co., Owensboro.

Maine—H. A. Marston Co., Gardiner; and Skowhegan Maytag Co. Store, Skowhegan.

Maryland—R. D. McKee, Hagerstown; and Brosius Bros. & Gormley, Rockville.

Massachusetts—Dupuis Piano Co., New Bedford; C. E. Osgood Co. and Bay State Tire Co., Boston; B. M. Feinburg Co., Marshfield; Danvers Hardware Co., Danvers; C. B. Lowe Co., Framingham; H. T. Crocker, Brewster; and C. H. Washburn, Taunton.

Michigan—Schwind & Kalahar, Merrill; and Earl Walker, Alma.

Mississippi—C. M. Pritchard, Lulu.

Missouri—Thiele Hardware Co., 3029 Cherokee St., St. Louis; Budarek Furniture Co., 1812 South 12th St., St. Louis; and A. J. Dillman & Son, Inc., Portageville, Hayti, and New Madrid.

Nebraska—Paramount Radio Shop, 2013 Farnam St., Omaha; and C. E. Brown, Grand Island.

New Hampshire—C. H. Avery Furniture Co., Nashua.

New Jersey—Henry C. Emery, 9 Harrison St., East Orange; Frederick C. Buchner, Audubon; Sol Sokler, Carteret; Sussex Electric Co., 71 Main St., Sussex; and N. M. Terwilliger, 307 George St., New Brunswick.

New York—Merchandise Distributing Co., 22 W. 23rd St., New York City; Pearl Sales Co., 3076 Bailey Ave., Buffalo; Luce Hardware Co., Gowanda; Seneca Garage, Salamanca; and M. H. Sanford & Sons, Albany.

Ohio—W. E. Kellerman & Sons, Chesapeake.

Oklahoma—Henry's Confectionery, Hugo.

Oregon—McNorman & Washburne, Eugene.

Pennsylvania — H. Feinberg, Inc., Chester; Neimans Hardware Co., Inc., Norristown; Guy Woodward, Washington; Henson Music Stores, Inc., Kane; H. A. Klingensmith & Son, New Kensington; Spear & Co., Pittsburgh; Sam J. Angus, Johnstown; and State Radio & Son Shop, Braddock.

Rhode Island—A. T. Scattergood Co. and A. W. Fairchild & Co., Providence; and Silent Glow Glenwood Sales, 2737 Pawtucket Ave., East Providence.

Tennessee — Abel Hardware Co., Cleveland.

Texas—McCall Electric Shop, Ennis; Carruthers Drug Co., Commerce; Milligan Electric Co., Sulphur Springs; and U. F. Barrett, Mt. Pleasant.

West Virginia—Cooey-Bentz Co., Wheeling; and Rhodes and Broadwater, Sistersville.

PATRICK'S SALESMEN WIN ALLEN-INGRAHAM CONTEST

NEW YORK CITY—February refrigerator sales which were 262 per cent of quota brought to George Patrick, Woodside division sales director, and his crew of seven salesmen the plaque which is awarded by Allen-Ingraham, Inc., New York Westinghouse distributor, to the division setting the best sales record each month.

Cecil Cannon's Flatbush division won second place with sales which were 200 per cent of February quota, and third honors were given to the Jamaica division, under Chris Marsden, whose record for the month was 153 per cent of quota. Joe Devane's Bronx division was fourth with 150 per cent of quota.

Salesmen whose work in February brought the award to the Woodside division are: R. Norman, J. Kennelly, G. Schiercke, D. Copeland, W. Schwickert, H. Pullian, and T. Murphy.

Stutz to Manage Sales In Majestic District

CHICAGO—Louis Stutz has been appointed sales manager for the northern Illinois district of Grigsby-Grunow Co., succeeding Harry Alter, who recently was called to the factory to be assistant general sales manager.

Mr. Stutz is well known in radio retailing circles, having been connected with Fada and Philco distributing organizations for many years. He will make his headquarters in the recently opened display rooms of the northern Illinois district at 35 East Wacker Drive.

18 DEALERS TO EXHIBIT IN SOUTH BEND

SOUTH BEND, Ind.—Indiana and Michigan Electric Co. here has offered use of its display room to 18 electric refrigeration dealers in the city for a series of refrigeration exhibits.

Each week the utility company, which recently abandoned retail merchandising, will have a display of the line handled by one of the dealers. Each dealer will have a salesman in attendance during the week his own product is on exhibition.

CLAGO CREDITORS WILL MEET APRIL 11

CHICAGO—A meeting of the creditors of the Clago Radio Corp., manufacturer of refrigerators and radios which was adjudged bankrupt Jan. 3, will be held April 11 in the court room of Harry A. Parkin, referee in bankruptcy, at 100 W. Monroe St. here.

Creditors will be asked to prove their claims against the bankrupt corporation; a trustee will be appointed and the bankrupt corporation examined. Time for filing claims against the corporation expires July 3, 1933.

Foreign Trade Men Open Meeting April 26

NEW YORK CITY—Executives interested in overseas commerce will study conditions confronting expansion of American foreign trade when they meet April 26, 27, and 28 in Pittsburgh for the twentieth National Foreign Trade Convention sponsored by the National Foreign Trade Council.

When the first general session is called to order in the William Penn hotel, where the entire meeting is to take place, those present will hear addresses on ocean shipping problems, trade with the British Empire, the Pacific arear, and relations with Latin America.

In the afternoon of the first day, there will be group discussions of foreign trade banking in cooperation with a special committee of foreign department bank executives. Another group will discuss inland problems, and still another will study export merchandising.

Scheduled for the first night is a special meeting of the National Foreign Trade Council and a trade promotion dinner.

Five addresses will make up the program of the general session set for the morning of April 27. Fred I. Kent of the Bankers Trust Co. and chairman of the committee on exchange restrictions of the council, will speak on the "Origin and Background of the Present Problem."

"Present-Day Problems Are Being Solved in Practice" will be the subject of H. H. Heiman, General secretary of the National Association of Credit Men. Other addresses will treat on government insurance for export trade, international barter, and treaty negotiations in world trade.

At the group sessions in the afternoon of April 27, discussions will be held on export trade problems and current credit and collection practice.

Further group sessions will occupy the morning of April 28, the last day. At these meetings will be discussed imports, coordination in foreign trade activities, and Latin America.

At the final general session, addresses will be given on the need for a council of foreign bondholders, the intergovernmental debts, the prospects for the international economic and monetary conference. And closing the entire convention will be an address on "The World Trade Outlook" by James A. Farrell, chairman of the National Foreign Trade Council.

U. S. Hermetic Issues Mailing Piece

MARION, Ind.—United States Radio & Television Corp. has just issued a new three-color folder for mailing and handout purposes which illustrates and gives key specifications of its 1933 six-model line of U. S. Hermetic electric refrigerators.

Each of the models is illustrated in the folder, and across the top of the piece is a panel showing closeups of principal features of these refrigerators.

Features illustrated are: porcelain evaporator, four-position door latch, dome light, moulded shelf supports, flat bar shelving, 10-point cold control, marine table top, and broom-high legs.

WATER COOLERS PLACED IN POSTOFFICE

WEST PLAINS, Mo.—Kelvinator water-cooling equipment has been installed in the new U. S. postoffice here by L. B. Berg, Kelvinator dealer.

Special Offer:

Forty-one (41) issues of Electric Refrigeration News

March 22, to Dec. 31, 1933 for $2.00

Because of the national and local bank holidays many of the readers of ELECTRIC REFRIGERATION NEWS whose subscriptions expired during March were probably forced to let their subscriptions lapse. We have a limited number of March issues in stock which will be supplied without extra charge to all old subscribers who request them when remitting for renewals.

Many readers like to have their subscriptions expire with the calendar year. Here is an opportunity to get your subscription lined up so that it may be renewed at the beginning of each new year.

Do you know someone who should be taking ELECTRIC REFRIGERATION NEWS, but who has been satisfied thus far just to read your copy each week? Have you a number of kibitzers in your office? If so, just show them this advertisement. This special offer makes it easy to get their very own copy of ELECTRIC REFRIGERATION NEWS for the remainder of the year at low cost.

Do you know someone who has wanted to subscribe to the NEWS, but who has hesitated to part with the regular subscription price during the troublous times we have just passed through? If so, he will appreciate being told about this special offer. At $2 the NEWS should be within the reach of everybody.

In these days of changing conditions, new products, revised price schedules, and new selling plans, it is of vital importance to everyone in the refrigeration industry to be kept fully informed on what is happening and to get that information in time to do something about it. ELECTRIC REFRIGERATION NEWS fills that need with its swift, accurate, complete, and interesting reports of industry events.

Electric refrigeration is just now entering its active selling season and everyone who expects to make a success of the business will want to be informed regarding every new turn of events. It is especially important to have immediate notice regarding any change in prices or terms, the introduction of new models and the activity of competitors.

You will also want the latest news about new markets such as beer cooling and air conditioning. Developments in these fields are being reported regularly in ELECTRIC REFRIGERATION NEWS.

Use this coupon to start a new subscription or renew an old one beginning with the Specifications Issue of March 22 and running through to the end of the year.

CLIP, SIGN and MAIL TODAY

Electric Refrigeration News
550 Maccabees Bldg., Detroit, Mich.

☐ **Enter a new subscription.** ☐ **Renew my old subscription.**

I understand that you will send 41 issues beginning with the Specifications Issue of March 22, and ending Dec. 31, 1933, at the special rate of $2.00.

Enclosed find ☐ **Check** ☐ **Money Order** ☐ **Cash** ☐ **Stamps.**

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THE NEWSPAPER OF THE INDUSTRY

ELECTRIC REFRIGERATION NEWS

WRITTEN TO BE READ ON ARRIVAL

Registered U. S. Patent Office

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DETROIT, MICHIGAN, APRIL 19, 1933

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TEN CENTS PER COPY

1933 STEWART-WARNER DELUXE MODELS STYLED

2-Cylinder Compressor, Modernistic Hardware Mark New Models

CHICAGO—Featuring a new opposed twin-cylinder reciprocating compressor unit and streamlined cabinets, Stewart-Warner Corp. has just added three new De Luxe models to its standard line of household electric refrigerators.

The new compressor is provided with a special force-feed chilled oil lubricating system, and is mounted on a rigid stamped steel base supported on four rubber cushions.

Model numbers and their sizes are: leader model no. 45, 4½ cu. ft. of capacity and 9 sq. ft. of shelf area; model 55, 5½ cu. ft. of capacity and 11 sq. ft. of shelf area; model 65, 6½ cu. ft. of capacity and 17 sq. ft. of shelf area; and model 77, 8 cu. ft. of capacity and 18½ sq. ft. of shelf area.

Door latch of the new models is operated by a finger-touch push or pull, Stewart-Warner engineers state, the handle being adjustable to four different operating positions.

Cabinets are of "all-steel" construction, with seamless welded acid-resistant porcelain interiors with rounded corners inside. The cabinet has a flat-recessed top and rounded exterior corners to give the streamlined effect. Legs of the cabinets are eight inches high.

Hardware has been re-designed, with

(*Concluded on Page 15, Column 1*)

GLASCOCK LINE WILL COOL BOTTLED BEER

MUNCIE, Ind.—For cooling and dispensing bottled beer, Glascock Bros. Mfg. Co. here has just announced a new line of bottle coolers, using either ice or Kelvinator electric refrigeration, according to C. A. Frick, general manager.

All coolers are built in angle iron frames, with provision for the condensing unit below the bottle-cooling compartment, and top-opening doors giving access to the refrigerated bottle compartment. Air-cooled refrigerating machines are used. All coolers have a bottle cap opener and a catch pan for the caps.

First of the new models is the "Glasco Public Service Cooler" with a coin meter device atop the cabinet which permits a buyer to get a 6-oz. bottle of beer by inserting a nickel in the slot.

This model stands 33½ in. high, 24½

(*Concluded on Page 14, Column 1*)

PALMER USES UNIVERSAL UNIT TO COOL BEVERAGES

DETROIT—Palmer Electric Co. here is bringing out a new enclosed-fountain display type of refrigerated beverage cooler for orangeade, lemonade, buttermilk, and other drinks which are served cold.

The cooler has a double glass dome in which the beverage to be served is continuously circulated as a fountain which impinges against the inside of the inner dome. The outer dome provides a dead air space between the two glasses for heat insulation, and to reduce condensation.

Six gallons of a beverage are stored, cooled, and displayed by the machine at one time, while 20 gallons can be cooled and dispensed in a day, Mr. Palmer claims.

The cooler occupies a floor space

(*Concluded on Page 14, Column 4*)

Lombard Joins Liquid Cooler Sales Staff

DETROIT—Appointment of Ralph D. Lombard to the sales department of Liquid Cooler Corp., maker of Temprite beer coolers, has just been announced by D. H. Dolison, sales manager of the company. Mr. Dolison also states that H. B. McLaughlin has been named Chicago district manager with headquarter in that city.

Universal Designs 10-Ton Machine

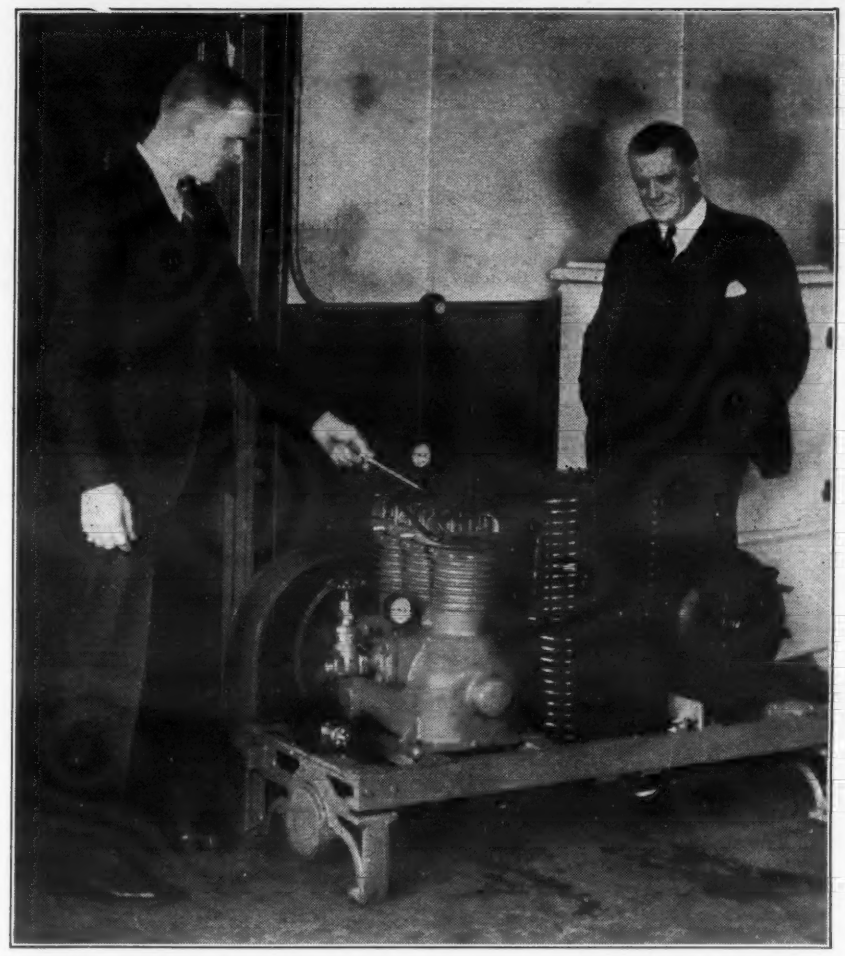
New Compressor Built For Air-Cooling Installations

DETROIT—Extension of the Universal Cooler line of commercial machines up to 10 tons was announced last week by G. M. Johnston, president of Universal Cooler Corp., with the introduction of a new three-cylinder, 10-hp. machine which produces 10 tons of refrigeration on an air-conditioning rating.

The new machine follows the general design of other machines in Universal's commercial line, except for a few departures to suit the larger capacity. It is shipped as a self-contained unit, complete with condenser, motor, liquid receiver, valves, controls, and a charge of refrigerant, according to William Higham, designing engineer.

Bore and stroke of the new machine

(*Concluded on Page 15, Column 3*)



William Higham, designing engineer, points out features of Universal Cooler's new 10-ton machine to G. M. Johnston, president.

UNIVERSAL HITS NEW EMPLOYMENT PEAK

DETROIT—With increases in both commercial machine sales and department store sales of household refrigerators, Universal Cooler Corp. has stepped up production to the point where more workers are now employed in the Universal factory than ever before in the history of the company, according to G. M. Johnston, president.

Commercial sales have shown an increase of 22 per cent this year over the same period of last year, Mr. Johnston reports. This increase is attributed to development of full production on the new 5-hp. condensing unit, and also to increased wholesale and contract sales of commercial equipment.

Several new firms have adopted Universal commercial machines as standard refrigeration equipment, one having been shipped a full carload just last week.

Department store sales of Universal household models increased 15 per cent this year over the same period of last year, Mr. Johnston states.

Mayflower Adds 2 New Models

DAYTON—Two new models, a 4½-cu. ft. job listing at $99.50 and a 6-cu. ft. model listing at $140, have been added to the Mayflower electric refrigerator line by the Trupar Mfg. Co.

The standard Mayflower 4½-cu. ft. box has been increased in price from $115 to $119.50. Included in the list price revisions are reductions of $10

(*Concluded on Page 20, Column 1*)

Plenty of Room

Evelyn Hagen tests the capacity of the new 6½-cu. ft. stylish De Luxe model of Stewart-Warner's 1933 refrigerators.

NEW CARRIER COOLER IS SELF-CONTAINED

NEWARK—With a Carrier refrigerating machine installed in the lower portion, a new self-contained room cooler has just been announced by Carrier Engineering Corp. of this city.

Known as the "Room Weathermaker," the new product is designed to be placed against the inside walls of a room to be cooled, or if desired it may be recessed in the wall or enclosed in a closet with suitable inlet and outlet openings for the air. It has approximately one ton of refrigerating capacity.

The exterior cabinet, 59 in. high, 40 in. wide, and 17½ in. deep, is fabricated of steel, with a dark walnut grain finish. The lower compartment housing the refrigerating machine, is insulated for sound, Carrier engineers explain.

Cooling coils operate in the upper compartment with the circulating fan which draws in air through a grille in the front of the cabinet, and discharges it through another opening in the top. An opening in the back serves as an outside air connection when ventilation is desired. Water, drain, and electrical connections are made from the outside of the cabinet.

Frigidaire Distributor's Sales Jump in Akron

AKRON, Ohio—The first two weeks of April have brought a 100 per cent increase in the refrigeration sales of the Akron merchandising district of the Ohio Edison Co., Frigidaire distributor, in the face of the fact that 85 per cent of the bank deposits in this area are frozen, declares George Longwell, merchandising manager.

"We are making more cash deals and down payments are larger. And cash it is, not checks. The people are

(*Concluded on Page 20, Column 1*)

Patterson Will Direct Mayflower Promotion

DAYTON—H. C. Patterson has joined the Trupar Mfg. Co. as director of sales planning and promotion for Mayflower electric refrigerators.

For the past six years Mr. Patterson has been assistant general sales manager of the Delco Appliance Corp., General Motor subsidiary. Prior to this job he was director of sales activities East of the Mississippi river for the National Cash Register Co. He has also been connected with the Vaile-Kimes Co. of Dayton.

G. E. INCREASES PRODUCTION ON REFRIGERATORS

Factory Forces In All Plants Increased To Meet Demand

CLEVELAND—Factory forces in all General Electric refrigerator plants have just been increased from 50 to 100 per cent to meet current sales, while shipments from the production line to the field now are at the rate of one trainload per day, according to P. B. Zimmerman, manager of General Electric's refrigeration department.

At the same time, plants manufacturing various refrigerator parts from motors and hardware to insulation and textolite strips, have been correspondingly stimulated.

Employes at the Fort Wayne factory, where commercial refrigerators are made, have been doubled, with day and night forces working six days a week to meet incoming orders while the refrigerator cabinet works at Erie now is on a full time basis with a 50 per cent increase in force and with production there at its highest peak in history. At Schenectady, the force is on a full time basis.

"Shipments now being made at the rate of a trainload per day are going direct from the production line to the field, and they represent actual sales," Mr. Zimmerman declared, "inasmuch as during the previous two months had come the peak movement to district warehouses, where stocks have become depleted.

"Distributors of General Electric

(*Concluded on Page 20, Column 5*)

ENGINEERS TO TALK ON BEER & KERO-UNIT

DETROIT—"Refrigeration of Beer" and "Kerosene-Operated Absorption Refrigerators" will be treated by speakers at the next meeting of the Detroit section, American Society of Refrigerating Engineers. The meeting will start at 8 p. m., Monday night, April 24, in the banquet hall of the Hotel Statler.

The first subject will be handled by John Wyllie of Kelvinator Corp., and will be based on the training course in beer refrigeration which Kelvinator is offering its field organizations.

The second subject, absorption refrigeration, will be discussed by Elmer Born, service manager of Gibson Electric Refrigerator Corp., Greenville, Mich. Mr. Born will explain the operation of the Gibson Kero-Unit.

CHEETHAM WILL MANAGE GIBSON COMMERCIAL DEPT.

GREENVILLE, Mich.—E. B. Cheetham, formerly of the commercial division of Kelvinator, has been appointed director of commercial sales for Gibson Electric Refrigerator Corp.

Mr. Cheetham was one of the organizers of the Kelvinator division in 1925.

Outside of his experience in refrigeration, he has had a varied career, having been an army officer during the World War and, after that, having lived in the Antipodes and in the Orient. He was married in Honolulu.

Butzloff to Supervise Westinghouse District

MANSFIELD, Ohio—H. M. Butzloff has been appointed refrigeration supervisor for the northwestern district by the Westinghouse Electric & Mfg. Co. The appointment became effective April 15.

Mr. Butzloff started in 1926 with Frigidaire Co., Davenport, Iowa. He left Davenport as the Tri-City sales manager and went to Chicago with the Stover Co., Frigidaire distributor.

While in Chicago, he served as salesman, then supervisor of household salesmen, and was promoted from these positions to the position of district sales manager for the south side and then as the provincial sales manager. His last position with Frigidaire Co. was metropolitan sales manager.

BY GEORGE F. TAUBENECK - - -

Free Advertising Through Pictures

For many moons we have been marvelling at the number of times we have seen Monitor Top refrigerators in sets of moving pictures. No doubt you have wondered how G. E. does it, too.

The Monitor Top is so unmistakable that it's just as good as a close-up of the nameplate, and undoubtedly makes excellent advertising. Hundreds of thousands of people, both here and abroad, obtain their ideas of what to wear and how to live by observing what movie stars wear and what they have in their homes.

The secret, as we understand it, is that George Belsey, who distributes G. E. appliances in Los Angeles, has an inside track to Hollywood studios.

Through his efforts, and those of his organization, come millions of dollars worth of advertising for G. E. products.

We've been meaning to mention this for some time, and are prompted to do so now by the following letter from R. E. Mangan, Belsey's alert advertising manager:

"The electric kitchen idea is developing rapidly and assumes more importance in the electric industry every day. There is little doubt that it will play an important part in the sale of kitchen appliances in the future.

"For several years the moving picture industry has made extensive use of General Electric refrigerators and ranges in their kitchen sets; as a matter of fact, we had General Electric refrigerators in 55 pictures produced in Hollywood during 1932. And now, the moving picture industry has adopted the complete electric kitchen for use in many productions where important scenes are laid in the kitchen.

"In our association with many of the leading studios we are given the opportunity to act in an advisory capacity in the erection of these sets and the electric kitchens that are seen on the screen today are technically correct.

"Through the medium of motion pictures millions of women are having an opportunity to see a complete General Electric kitchen; and the very fact that these kitchens are used in moving pictures is generally accepted by the public as evidence that they are the modern kitchens of today and the future.

"I am enclosing a 'still' from a Mack Sennett comedy, 'Sweet Cookie,' to be released soon, in which much of the action of the production took place in the electric kitchen shown in the enclosed picture."

* * *

Ed Hughes Bags a Buck

ED HUGHES has returned to Copeland to take charge of production activities after an absence of six months from the factory.

Ed, you know, is a great hunter. Most of last winter he spent pursuing his favorite sport.

Chief prize of the season was a 300-pound buck deer. It was a ten-pointer with an antler spread of 19½ inches. During the 1932 hunting season only one other hunter in the nation bagged a buck so large.

In the Hughes home the mounted head, described by Ed as "the most symmetrical head I have ever seen," is now challenging all doubting Toms.

* * *

Still a No. 1 Risk

L. Y. McANNEY of the C. I. T. Corp., New York City, tells us that our editorial in the Dec. 28 issue on "Uniform Practice" did the work.

This editorial suggested that manufacturers of household electric refrigerators die-stamp serial identification numbers into the wood or metal of the cabinet, instead of affixing such numbers to the cabinet by means of plates, thus preventing unscrupulous dealers from selling refrigerators "out of trust."

This idea was strongly favored by the C. I. T. Corp. and other time payment financing companies. Mr. McAnney sent copies of the editorial to a number of manufacturers and other interested persons, and reports that the response—and adoption of the idea—was almost 100 per cent.

Electric refrigerators, he declares, are still a first-class risk. Repossessions may have increased somewhat, but they are yet extremely low.

C. I. T. Corp. has just worked out a new scheme for Westinghouse by means of which *all* Westinghouse appliances may be sold on time payments, even the small ones. It's an overall plan, based on total volume.

* * *

Strange Places

Omnivorous readers will find electric refrigeration mentioned in many strange places. For instance, one of the most talked-about new books is "Hot Places," written by a 25-year-old Englishman following a visit last year to South America. On page 12 you'll bump into this:

"The smart audience of the boes was leaving in a bunch. Senora Villegas was giving a cocktail party to test her big new Frigidaire."

Scene of that particular action was laid in Chile.

And in the funnypapers we found Pa Winkle reaching into a big electric refrigerator (you can see the ice cube trays) which looks something like a Grunow. The Winkles undoubtedly belong to one of the low-income classes, which indicates something about penetration of that market, doesn't it?

Another Sunday funnysheet family, "Mr. and Mrs. —," recently fussed because Joe monkeyed around an electric refrigerator (looks like a Copeland) instead of wiping the supper dishes.

All of which goes to show that electric refrigeration is definitely a part of the public consciousness, and is accepted as an integral part of the home scene.

* * *

Worm Charmer & Mosquito Trap

Something brand new in the line of companion merchandise is being made by the Swartzbaugh Mfg. Co. in Toledo (manufacturer of Klenzair air conditioners), according to E. A. FORKNER, assistant sales manager of the Wagner Electric Co., who visited the Swartzbaugh plant not long ago.

"Worm Charmer" is the name given the new product, and the device is exactly what its name implies.

It consists, Mr. Forkner says, of two electrodes attached to an ordinary extension cord.

The electrodes are sunk in the ground, and the current turned on. Whereupon, the worms in the area between the two poles, being shocked at such treatment, crawl out immediately to make a complaint.

Just thought you might like to know more about it.

But we're not finished. Dr. T. J. HEADLEE and his associates at the New Jersey State Experiment Station, we are informed, have recently perfected an electric mosquito trap!

It consists of an iron cylinder, at the front of which is mounted an electric light bulb with a reflector behind, and an electric fan back of that. A fine wire screen closes the rear of the cylinder. A cyanide collecting jar fits into the cylinder in front of the screen. Mosquitos are attracted by the light and blown by the fan into the cyanide jar.

Mounted with a wind vane and on a ball-bearing device, the trap always faces the wind. An ordinary 110-volt circuit supplies the current. A switch operated by an electric clock will turn off the device when daylight comes.

Why wouldn't it be a good idea to hitch up the worm charmer and mosquito trap, and sell them as one device? Should be an excellent market among fishermen and campers.

* * *

Comparative Costs

A friend of ours (he insists on remaining anonymous) who is in a position to study carefully all phases of refrigeration, but who is not in any way connected with the sale of electric refrigerators, has just completed a study of comparative operating costs of the three principal types of household refrigeration, and has come to these conclusions:

"Ice Refrigerators—With ice at 60 cents per 100 lbs., during the six months from May to October, inclusive, a normal family would use an average of $5 worth per month. The other months we presume the ice bill to average $1.50 per month. This would total $39 per year.

"Gas Refrigerators—With gas at $1 per 1,000 ft., it is estimated . . . that the cost of operation of a gas refrigerator would not exceed $2 per month, or $24 per year. There would be an additional charge for water for condensing purposes, where water is on a meter basis. I believe, for example, in New York City that it is figured at the rate of $1 per month for the water used, or $12 per year.

"Electric Refrigerators—Presuming a 1/6-hp. motor is used, this would consume approximately 125 watts per hour, or .125 kilowatts. The normal electric refrigerator will have the motor running between 12 and 14 hours per day. If we assume the higher figure, the motor will use 1.75 kilowatt hours per day. On the basis of the cost of electricity of five cents per kilowatt hour, the cost per day would be 8¾ cents, or $2.63 per month, this for a 30-day month, or $31.60 per year."

* * *

Moonshine

The other day we found on our desk a postcard bearing an interesting picture of a Kentucky mountain scene. In the foreground is a fire burning between two large rocks, atop which is weird looking kettle with a blue metal pipe leading to a barrel conspicuously marked "Coffee."

And from the bottom of the barrel, there drips into a half-filled bottle a tiny stream of Kentucky moonshine.

The card was from JIMMY DAVIN, sales promotion manager of Grunow Corp., who was in Louisville at the time conducting a dealer meeting—his fortieth this year—at the Philco Sales & Service Co., Grunow distributorship.

* * *

Beer Glossary— Don't Miss This!

A week or so after President Roosevelt signed the bill making 3.2 per cent beer legal, a friend sent us a clipping which we want to reprint here. From what paper it comes we don't know, but it's worth reading. Here it is:

"Brewers here today were considering a glossary of beer terms for a generation of synthetic drinkers. As a starter, they offered the following:

"BEER—An effervescent, sparkling beverage, resulting from thorough alcoholic fermentation of a solution of water, hops, barley or other cereals. On consumption, pleases palate, increases appetite, and awakens gentler nature if you have one.

"LAGER (pronounced Lah-ger)—Aged beer. The kind you will mostly get.

"COLLAR (or head)—That foamy top.

"GROWLER—Any kind of open receptacle—usually a tin pail—used to convey draft beer to the home, office, club or what have you. Sometimes called 'can'; e.g. 'to rush the can'.

"BUNG STARTER—Wooden mallet to open beer kegs. Often used in old days to quell boisterous customers.

"SHELL—A long, straight glass, holding from 8 to 10 ounces, not counting foam. The usual one.

"PILSENER—Another type of glass, small at bottom, wide at top. Peculiar to high hat places. Doesn't hold as much as you'd think.

"SCHOONER—A goblet type glass, built solidly, with hefty base and stem. About 10 to 13 ounces capacity. Favored by men of brawn.

"BATTLESHIP—A super schooner holding about a quart. For exhibition drinkers only.

"SEIDEL—A stein with a hat.

"SHORT ONE—Midget glass, favored by bartenders, weaklings, and people who have to get back to work. Sometimes called a 'snit'.

"STEIN—Large, heavy glass or stone mug, used only in well ordered places, where customers could be trusted not to throw it.

"SLEEPER—A beer somebody has forgotten to drink. Property of the bartender or whoever notices it first.

"DEAD ONE—A sleeper that has slept too long. Can be used to polish brass or, combined with Epsom salts, to paint winter scenes on the bar mirror.

"HOME BREW—A queer, yeasty fluid, tasting slightly of rubber, and having all the internal effects of a bomb. (Obsolete.)"

* * *

King Kong, Bette Davis & Walter Winchell

G. E. distributors may remember AILEEN CREELMAN, movie critic of the *New York Sun*, as one of the party on the "42nd Street Special" transcontinental train.

Saw her in New York City, and was regaled by stories about the production of "King Kong," movie thriller which Miss Creelman's brother wrote.

Possibly you've seen it, and would be interested to know that it is four-process photography (four different exposures on one film), and that it took a year and a half to make. The monster animals were really tiny—it was just the trick photography which made them look big.

Miss Creelman reported that BETTE DAVIS, with whom many G. E. men are now acquainted as a result of that trip, is heartsick because the role of "Alice" in "Alice in Wonderland" is to be given to MARY PICKFORD, instead of to Bette. Bette thought her long neck should help qualify her for the part!

Talked also with WALTER WINCHELL, who was pleased pink with FRED SHAW'S idea of having the Florist's Telegraph Delivery Association send orchids, free of charge, to those Winchell thinks deserving (have you heard MACK GORDON'S new song, "An Orchid to You," dedicated to Winchell?).

Fred, you know handles publicity for Kelvinator and Leonard, as well as for the florists. He belongs to the Brooke, Smith & French advertising agency.

* * *

Irwin & Einstein

JIM IRWIN, Frigidaire Corp.'s publicity man, made a smart move from the standpoint of good publicity when he succeeded in getting Prof. Albert Einstein to inspect the 1933 Frigidaire at Con Eakin's dealer meeting in New York City on March 25.

Several publications made mention of the incident. Among them was *Time*, nationally circulated newsmagazine, which characteristically made this one-sentence comment:

"General Motors men were overjoyed when, at a ceremonious Manhattan pre-showing of their stylish new Frigidaire (ice box) which costs no more to run than one ordinary electric light bulb, Albert Einstein, on his way to Switzerland (instead of anti-Jew Germany), called it a marvel, said it would be welcome in Europe where electricity is far dearer than in the U. S."

GEORGE BRITT, staff writer of the *New York World Telegram*, attended a reception given for the famous physicist at the Waldorf-Astoria Hotel (where the Frigidaire meeting was held). In his account of the professor's remarks at the gathering, he wrote:

"It was a reception yesterday afternoon given by Mme. Rosika Schwimmer. Among the guests was also a publicity man (Jim Irwin) for an electric refrigerator company, currently having an exhibit in a nearby suite at the hotel, and following the social and pacific exercises the publicist led the professor away, allowed him on hands and knees to inspect the inward working of his refrigerator and photographed him five times."

Later, this:

"The reception, however, at length was ended. Then Professor Einstein retired to his room for a nap. And then he came downstairs again alone to view the refrigerator. The sales manager announced that he is sending one 1933 model to the professor's new home in Amsterdam."

News-Week, a new competitor of *Time*, also described the professor's inspection of the new Frigidaire in its issue following the New York meeting.

* * *

Poet's Corner

Jim also brightened up one of our mornings with the following note and poem inspired by the departure of C. T. MUTCHNER, tired Frigidaire public relations director, on his sabbatical leave of absence:

Dear George:

When Mutch left Thursday morning for Tucson, a small group went to the train to wish him good luck. He was presented with a scroll showing Indians galloping all over the paper. On the margins were signatures of Frigidaire friends from E. G. BIECHLER down.

Here is the poem, if it can be called that, that appeared on the scroll in type.

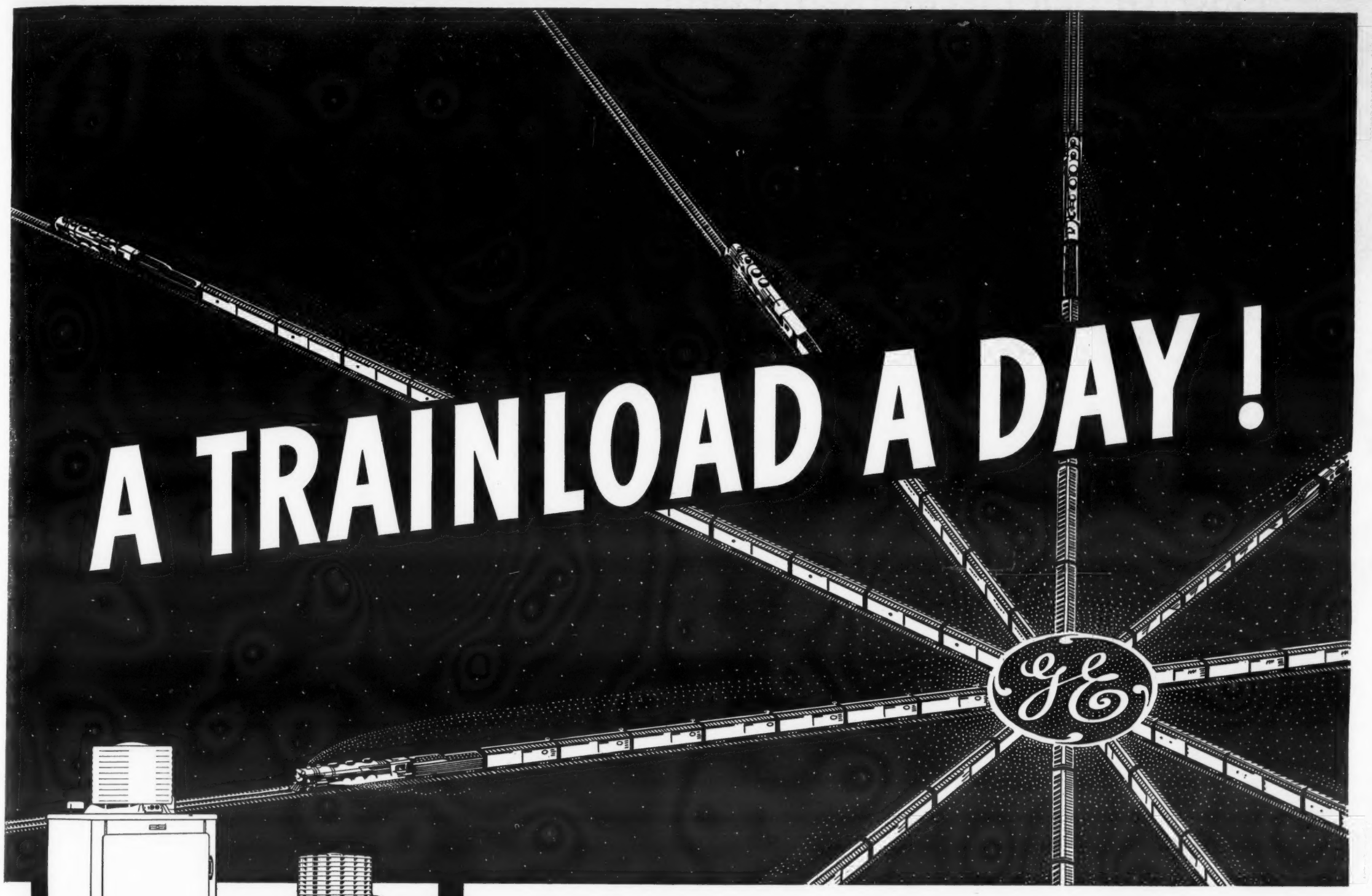
To the land of the Apaches
To the land of Indian Legends
Goes the Chieftain Mutcho Mutchner
Leaves the camp-fires of the Dayton's
Leaves the Council of Ohio
Leaves the chilly Frigidaire-o
Leaves behind him braves and braggers
Sales Promoters, advertisers
Pushers of the pen and pencil
Ballyhooers of the ice-box.

While the Big Chief Mutcho Mutchner
In the land of Indian Summer
Sits becalmy by his wigwam
Reading of his tribe in Dayton
In the columns of the Cox sheet
Thumbs the pages of a weekly
Time and Collier's lay beside him
Fortune every month will greet him
From the Literary Guilders
Books will come for his enjoyment
While he sits outside his wigwam
He will know his tribe is thinking
Of him in the Apache country
Waiting for their Chieftain Mutchner
Waiting for the Big Chief Mutcho
To return unto their camp-fires
To the land of Frigidaire-o.

This our song to Big Chief Mutcho
This our wish for happy landings
And our wish for your returning
Quickly to your tribe in Dayton.

How to Run a Department Store

Enough General Electric refrigerators to start a distributorship are shown—and frequently—in the department-store talkie, "Employes Entrance," from which the above scene is taken. In the background is a G. E. water cooler. (See story at left.) Warren William is making the speech, while Wallace Ford is at his right.



The New 10* G-E
The New Flat-Top General Electric
priced as low as $99.50 plus tax and delivery
The G-E Standard Monitor Top
The Monitor Top mechanism alone among leading makes is GUARANTEED 4 YEARS against mechanical failure
General Electric Kitchen

● The Greatest Array of New Features ● The Greatest Public Preference ● The Greatest Range of Prices ● The Greatest Opportunity for CONTINUED PROFITS

America Is Buying General Electric Refrigerators—

G-E Factories Are Humming to Meet the Demand!

FACTORY forces in all G-E refrigerator plants have increased from 50 to 100% to meet current sales. Shipments from production line to field are at the rate of a trainload a day! The Ft. Wayne factory is on a 24-hour schedule with doubled force to keep pace with incoming orders. Production at G-E's cabinet works has reached the highest peak in history. G-E distributors report more store traffic in the past 30 days than for the previous 9 months, with a similar increase in consumer sales. Chicago delivers 351 G-E refrigerators in one day! Boston reports the biggest retail day in history. New York retail sales are running 100% ahead of last year. Nashville books more dealer business in 1 day than for previous 2 months. Cash sales throughout the country are notably increasing.

America is buying *General Electric* refrigerators! G-E's great 1933 sales program is sweeping the country—with the greatest array of new features, the greatest range of prices, and the greatest sales stimulator in electric appliance history—the General Electric Kitchen!

The modern trend is to the *all-electric* kitchen. A complete General Electric Kitchen is the ambition of every housewife who sees it. A G-E refrigerator is only the *first step*. G-E retailers make a profit on *every step*—the G-E Range, G-E Dishwasher and other General Electric Kitchen units. And the overwhelming desire for such a kitchen *stimulates* the purchase of a G-E Refrigerator—the first step towards the goal! General Electric Co., Specialty Appliance Sales Dept., Section DF4, Hanna Building, Cleveland, Ohio.

GENERAL ELECTRIC

ALL-STEEL REFRIGERATOR

How To Sell Electric Refrigerators

Sales Methods Used By Kelvinator's 20 Star Salesmen

DETROIT—When 20 star salesmen, winners in Kelvinator Corp.'s national Christmas sales contest, came to Detroit recently as guests of their company, they had tales aplenty to tell as to how they "made the grade."

Yet varied as were their stories of salesmanship, one thing was noticeable—not one man credited his good sales record to tricks or queer sales schemes. Rather, the stories told were of strenuous application of orthodox sales methods.

Here are some of the things these men had to say:

Contacts Prospects Frequently

R. N. Moore of the Pearson Piano Co. in Indianapolis makes sales by contacting each prospect frequently until the latter buys a refrigerator or proves conclusively to the salesman that he will not be able to buy a Kelvinator for a long, long time.

"This isn't mere stubbornness," said Mr. Moore. "There is one time and one place when a prospect will reveal the vulnerable spot in his armor of objections against signing an order. I just try to stay with each prospect long enough to strike the right combination of circumstances that will bring about a sale."

Salesman Moore has another sales creed: Decide what model your prospect should buy, then sell that model; don't compromise. "A buyer will never be satisfied with a refrigerator that is too small," he said. "So after I've decided what model is best for my prospect, I talk that and nothing else." (Average sale made by Mr. Moore during the contest was slightly above $300.)

In Elizabeth, N. J., is Harry Londa of the Public Service Electric and Gas Co. who believes that most sales will come to the salesman who makes as many calls as possible each day.

"I frequently make as many as 30 calls per day," he said, "and naturally uncover far more prospects than I would if I saw only a few persons. As in other things, the law of averages applies here—many prospects, many sales.

"Always I try to detect as quickly as possible what particular part of the sales story appeals most to the prospect, and then I concentrate on that. And I ask for the order often. It pays."

It is by stressing the up-to-date-ness of electric refrigeration that Thomas Yarrell of the El Paso (Tex.) Electric Co. makes his sales. "I find most prospects already sold on the economy of electric refrigeration," he said, "so I emphasize the point that no home is truly modern without it.

"My best source of prospects is Kelvinator users. Prospects found through users are best because they are usually persons of the same means as the users, and are already partially sold on a new refrigerator because they have seen one in use in their friends' homes."

Hot Prospects Only

J. K. Birchfield, Mountain States Power Co., Albany, Ore., believes he is wise in telling his sales story to no one but hot prospects.

"When I first call on a suspect, I size him up to determine whether he's actually in the market for a Kelvinator or is only slightly interested," said Mr. Birchfield.

"If the person indicates that he is genuinely interested, I contact him as frequently as is necessary to make the sale. If he has a disinterested attitude, I leave him alone.

"I can make far more sales by working with hot prospects than by trying to build each suspect's refrigerator enthusiasm up to the buying stage."

This man locates most of his prospects through friends in the service department. Says he: "I contact men in the service department every day to get leads they have picked up, and during the Christmas contest, 25 per cent of the sales I made were to persons found for me by service men."

Enthusiasm Over Product

William Clauss of Cincinnati's May Stern Co. is a floor salesman. He believes that the best refrigerator salesman is one who is enthusiastic over his product, backed by sales experience, and possessed of a liberal quantity of stubbornness.

"Many a sale has been closed because the salesman was just too stubborn to admit he was beaten when it appeared that his arguments were falling on deaf ears," Mr. Clauss said.

"Good floor salesmanship," he added, "requires two things of the salesman: that he use the demonstration model as the basis of his presentation, and that he ask for the order often.

"I ask for the order every time I see that one particular point has interested my prospect. Too many salesmen talk themselves into a sale, then instead of asking for the order, talk themselves right out again."

Mr. Clauss declared that a salesman must sell himself to the prospect before a sale can be made. "When I find that I am not 'clicking' with a certain prospect, I turn that prospect over to another salesman, because people do not buy from salesmen they don't like," he said.

When Furman Bischofberger of the Public Service Co. of Colorado, Denver, found it almost impossible to sell commercial refrigeration equipment to proprietors of food stores and to established apartment house owners, he began to look for a new market—and found one.

Said this salesman: "I discovered that many private residences of one-time wealthy Denverites were being converted into small apartment houses. I contacted owners of these houses, showed them how installation of electric refrigeration equipment would increase the desirability of the quarters."

Paid for Every Call

Salesman L. E. Wheyland of the Alabama Power Co. in Mobile has created for himself a "salesman's psychology" which "keeps him going strong all the time." Here is his explanation of it:

"Many salesmen feel that their time is wasted if they make a call and don't get a signed order.

"The theory I follow is that I am paid for every call. I divide the number of calls I make in the course of a month into my average pay. I then go about my work with the feeling that I am being paid for every call."

Mr. Wheyland uses figures and printed facts whenever possible to prove statements made during his sales presentations, and usually finds it necessary to make at least three calls to sell a prospect.

Prime requisite of a commercial refrigeration salesman is that he be familiar with the business problems of those to whom he attempts to sell his product, thinks S. F. Smith of the Kelvinator Sales Corp. in Long Island City, N. Y.

"Above all else," he declared, "I try to show my prospect that I know what I'm talking about. I try to speak a language he understands. A prospect would not take my recommendation as to refrigeration equipment if it were apparent that I knew nothing of his problems."

Best commercial refrigeration sales appeal today is economy, this man believes.

Don't Rush a Prospect

"Don't rush a prospect," is the rule of Henry Fautsch, household salesman of John Van Benschoten, Inc., Poughkeepsie, N. Y., who follows a definite plan in making sales presentations to each prospect.

"When I make my first call on a prospect," this salesman said, "I make it apparent that I don't intend to try pushing the sale through at one sitting.

"I try first to sell myself as a responsible Kelvinator representative in whom my prospect may have confidence. Then I sell the reputation of Kelvinator. Then I emphasize the reputation of my own local company, and finally start direct sale of a refrigerator."

Mr. Fautsch finds it a good policy to introduce himself to new prospects and make appointments with them by telephone. Having made his first personal visit to a prospect's home, he calls at other residences in the neighborhood where ice signs are displayed, and so starts a series of calls at these places.

No prospect is dropped from this salesman's list so long as he feels that there is a possibility of making a sale. When prospects refuse to buy a refrigerator at Mr. Fautsch's first closure attempt, he sends each of them a personal letter, then calls for another try.

Keep in Touch with Users

Most important thing a household refrigerator salesman can do is keep in close touch with his users, believes Ray Nelson of the Koren Kelvinator Co. in Peoria, Ill.

"If buyers are pleased with the attention I pay them *after* the sale has been made, they will supply me with the best of prospects," stated this man.

"Recent purchasers are especially proud of their refrigerators, and are unusually anxious to tell me the names of friends who are likely prospects. Regular calls on all users pay good dividends."

"In fact," he said, "I go out of my way to make my prospect realize that I am not making any extravagant claims, and this seems to win me the confidence of prospects."

Newlyweds Don't Pay

D. L. Dunn, salesman for Northern States Power Co. in Minneapolis, has found that presentations to newlyweds don't pay.

"I concentrate my efforts on the older homes and families in the city," he said. "Calling on newlyweds is usually a waste of time. They seem to have a lot of expenses and don't have the money to spend for an electric refrigerator.

"The older, settled people are the ones who are able to buy today. Their houses may not look so up-to-date as the newer and finer ones, but nine times out of ten their owners have them paid for and are in a position to buy electric refrigeration."

Mr. Dunn obtains most of his prospects from users, but when using the cold canvass method of locating possible buyers, he works a given territory block by block until he has visited all homes in the area. "I save time that way," was his comment.

High pressure salesmanship is taboo with H. A. Westbrook of the Virginia Public Service Co. in Alexandria, Va.

"I try to carry on a quiet and intelligent discussion of the merits of electric refrigeration with my prospects," he said, "and I find that the fewer sales bombardments I use, the better my results are.

"To as great an extent as possible, I use the sales plans furnished by the factory, because the advertising and sales promotion back of these plans does a great deal toward helping me close sales."

Salesroom Demonstrations

J. M. Scholem of 555, Inc., Little Rock, Ark., places great emphasis upon the importance of getting prospects to the salesroom for demonstrations.

His statement was, "When I can let a prospect actually see the things I am talking about, I have an advantage over the fellow who merely talks."

Mr. Scholem invariably attempts to discover what features of electric refrigeration have the greatest appeal to his prospects, and then stresses these points throughout his presentations.

Before a salesman can sell others, he has to sell himself, is the belief of Marvin F. Sutherland, Southern Public Utilities Co., Hendersonville, N. C.

"In my opinion, an insincere salesman—one who isn't thoroughly convinced of the things he says to prospects—is a failure," said Mr. Sutherland. "A salesman has to believe in, and be enthusiastic about, his sales story before he can make it effective.

D. L. Calmes of the Standard Motor Car Co. in Baton Rouge, La., thinks that the only way to sell a good volume of commercial refrigeration equipment is to keep in constant touch with all prospects.

"A salesman should never let much time elapse between visits on any prospect," he said, "because often some sort of business change will convert him suddenly into a buyer, and the salesman who has called most frequently is likely to get the order."

Mr. Calmes claims that he has never cut a price to get an order, explaining that once started, this practice is difficult to stop, with the result that quality of that product is lowered in the eyes of the community.

Pays Attention to Users

Francis Cleary, Milwaukee Electric Railroad & Light Co., Milwaukee, spares no effort to keep in close contact with his users, for he believes them to be the best available source of prospects.

Mr. Cleary asks his users to call him personally when service is needed. He calls on all users regularly. And he never destroys the name of a prospect. Once a month he visits or calls on each one, giving them the substance of some new Kelvinator announcement, or reminding them of some feature presented before.

Frank Meoni, commercial salesman for the Kirkmyer Electric Co. of Richmond, Va., agrees with S. F. Smith that a successful commercial salesman must understand the problems of the men to whom he talks, and finds that most and best prospects come to him through users.

"Particularly do I pay attention to the occasional knockers among my users," said he, "for I have found that it takes only a little attention to make a booster out of a dissatisfied user. And the best booster of all is a converted knocker."

Employs Family Psychology

F. P. Moore of the Cumberland County Power & Light Co. in Portland, Me., exercises his knowledge of "family psychology" in his sales activities. His remarks were these:

"I always make an effort to sell the woman, because in the majority of cases, the order will follow when the woman has been sold. But when the woman remains doubtful, I try to sell the husband, because men like to feel that their wives come to them for an opinion, and the men enjoy placing their stamp of approval on a purchase."

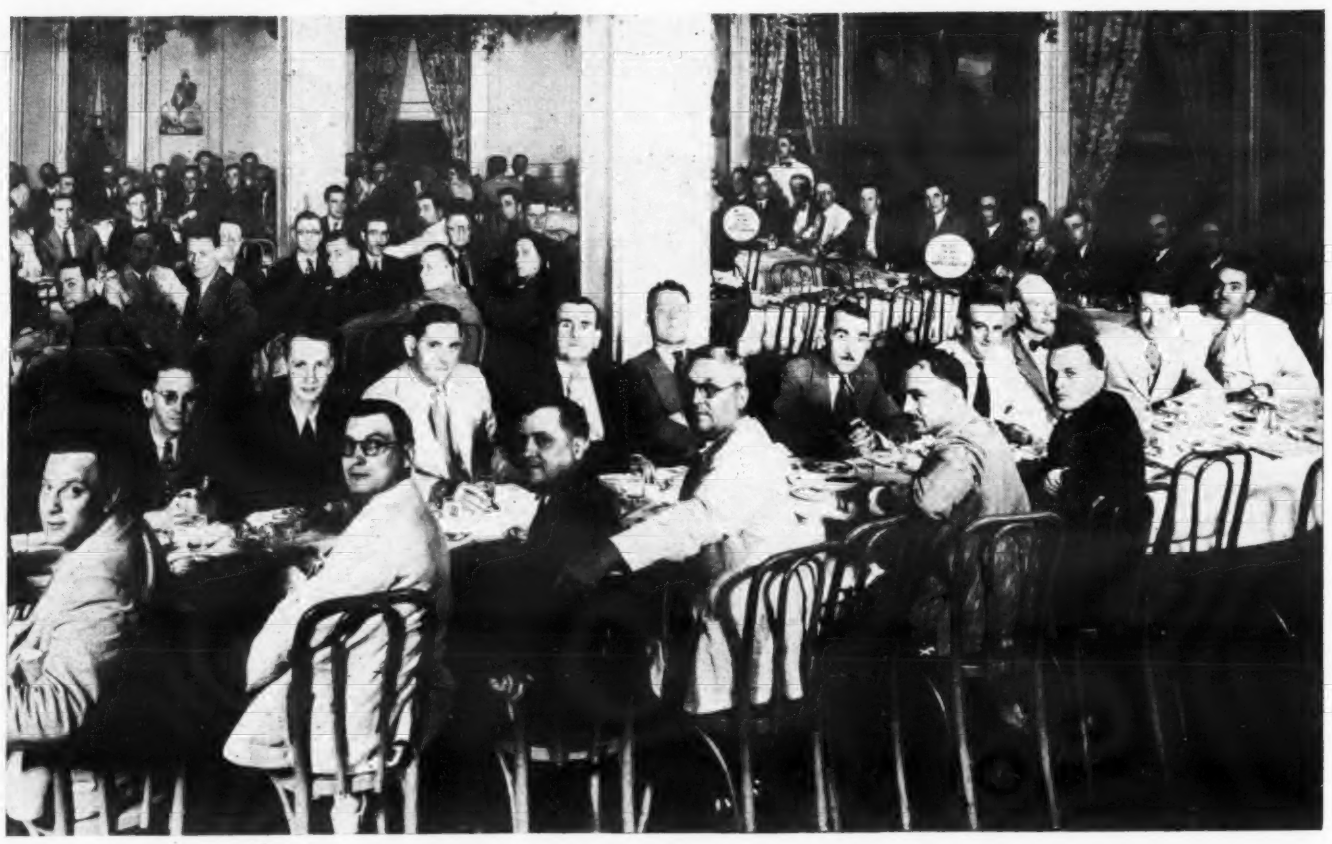
"A refrigerator salesman has to be a good listener," said Gus Miller of the Ralph B. Swiger Co. in Clarksburg, W. Va. "It goes without saying that he must be a good talker with plenty of facts to back up his statements.

"But he must be able to lend a sympathetic ear to the prospect's story—and every prospect has a story to tell."

This practice of hearing what the prospect's needs and arguments and complaints are, inspires a liking for the salesman in the prospect, and so enables the salesman to do all of the talking when the time arrives for a closure, said Mr. Miller.

Successful commercial selling is a matter of doing good "missionary" work, thinks Frank Tighe of the Kelvinator Sales Corp. in Cambridge, Mass.

"By calling on my prospects over a long period of time, and by avoiding use of all high-pressure methods, I win the confidence of those prospects in both myself and my product. Then when a prospect is ready to buy, he'll usually come to me," said this salesman.



Dinner Meeting, New Orleans, Electric Refrigeration Bureau

COOPERATION LESSENS ELECTRIC REFRIGERATION SALES COSTS

A part of every electric refrigerator advertisement and a part of every salesman's time is devoted not to the sale of a particular brand of refrigerator but to educating the prospective buyer on the merits of electric refrigeration generally.

This task can be done at less expense in any community if a part of it is accomplished cooperatively.

Where there is an Electric Refrigeration Bureau the education of the local public and its interest in electric refrigeration is economically maintained by cooperative newspaper advertising, frequent cooperative shows and other coordinated activities. The individual expense to each sales outlet is small but the massed cooperative effect is powerful.

Common and planned effort on the part of dealers and the central station, as proved in hundreds of Bureau towns reduces cost and increases sales.

INVEST IN AN ELECTRIC REFRIGERATOR

If there is an Electric Refrigeration Bureau in your community it will pay you to support it. If there is none discuss with local central station men the possibility of such organization.

Electric Refrigeration Bureau

420 Lexington Ave. New York City

WHEN YOU SELL MAJESTIC *YOU SELL* Refrigeration

because of this

ELECTRO-SEALED COLD DOME

Travelers on the Twentieth Century or the Broadway are interested first of all in *dependable transportation*—transportation that always gets them there.

Refrigerator buyers, likewise, are interested in *dependable refrigeration*. Unless they *do* buy dependable refrigeration all the "features" and "gadgets" that refrigerator sales-talk is loaded with are useless. As useless as valet service on a train that doesn't run.

Majestic dealers can sell refrigeration because they have refrigeration to sell! Majestic Refrigeration is trouble-free refrigeration. The *heart* of the Majestic refrigerator—its motor and compressor—is housed in the Electro-Sealed Cold Dome.

Steel everlastingly fused to steel *permanently* shuts out dirt, moisture, abuse, and tampering. No Majestic dealer need take a course in refrigerator surgery. All he has to do is *sell*—the service is *built in.* And backed up, too, with a 3-year guaranty.

Refrigeration—or refrigerators? Take your choice. If the former, you belong with Majestic—and the profits you make stay with you. Get facts and figures. They'll open your eyes!

A SIMPLE STATEMENT ABOUT GUARANTEES

The Majestic Electro-Sealed Cold Dome is the *only* refrigerating unit in the industry that is UNCONDITIONALLY GUARANTEED FOR 3 YEARS.

GRIGSBY-GRUNOW COMPANY, Chicago, and affiliates, with factories at Chicago; Toronto; Bridgeport; Oakland; London, England; and Sao Paulo, Brazil

Majestic

ELECTRO-SEALED

REFRIGERATION

COMPANION MERCHANDISE

MAJESTIC ANNOUNCES 2 TABLE-TOP RADIOS

CHICAGO — Grigsby-Grunow Co., manufacturer of Majestic refrigerators and radios, is introducing two new models of a table-top radio which will retail for $29.50.

The new unit will operate on 110-volt alternating or direct current. It is a superheterodyne receiver with six tubes, dynamic speaker, full-pentode amplification, and self-contained aerial.

Model 411 is modernistic in design, its cabinet being finished in walnut and inlaid with other woods. A suede carrying case is furnished with this model at extra cost. Other model, 413, is finished in a leatherette carrying case, front of which is removable to facilitate adjustment of the dials.

Connelly To Distribute Zenith Radios

CHICAGO — F. B. Connelly Co., Northwest distributor for Grunow refrigerators and other electrical appliances, has been named distributor for Zenith radios, according to E. A. Tracey, general sales manager of the Zenith Radio Corp.

The Connelly firm will have exclusive distribution of the line in Washington, Oregon, Idaho, Montana, and part of Wyoming.

Insulator Installed For WLW Tower

CINCINNATI—Work of constructing the world's most powerful broadcasting station is expected to progress rapidly following the recent installation of the porcelain insulator to serve as the base of the new 831-ft. steel vertical radiator antenna which will be a part of the new WLW (Crosley Radio Corp. station) 500,000-watt transmitter plant. The entire development will involve a cost of more than $400,000.

Embodying new principles in radio engineering, the steel tower itself will serve as the antenna. Because of its vertical position and height much of the electrical energy heretofore lost in space through flowing directly upward will be diverted and will radiate parallel with the earth's surface. The new antenna is to be completed in June, and will be put into use immediately with the present 50,000-watt WLW transmitter. Approximately six more months will be required to complete the 500,000-watt transmitter station.

MADISON DEALER FOR G. E. CONDITIONERS NAMED

MADISON, Wis.—Badger Air Conditioning Corp. here has been appointed local dealer for General Electric air-conditioning equipment.

G. E. ADVERTISING TO FEATURE REGULATOR

NEW YORK CITY—With its 1933 newspaper advertising appropriation double that of last year, the air-conditioning department of General Electric Co. will use an indirect method of reaching oil burner prospects this season by featuring the G. E. heat controller, a thermostatic regulator for coal furnaces.

General Electric officials believe that this type of advertising will not only create actual sales for the heat controller, but will open doors for salesmen who may be able to sell oil furnaces to prospects interested originally only in the heat regulator.

Advertising of the G. E. heat controller will be placed principally in 45 cities where dealerships are now handling the oil heating equipment, and will be extended to midwestern cities as dealerships are established there.

It is planned to use this method of advertising for oil burner sales promotion until it becomes advisable to advertise the price of the equipment.

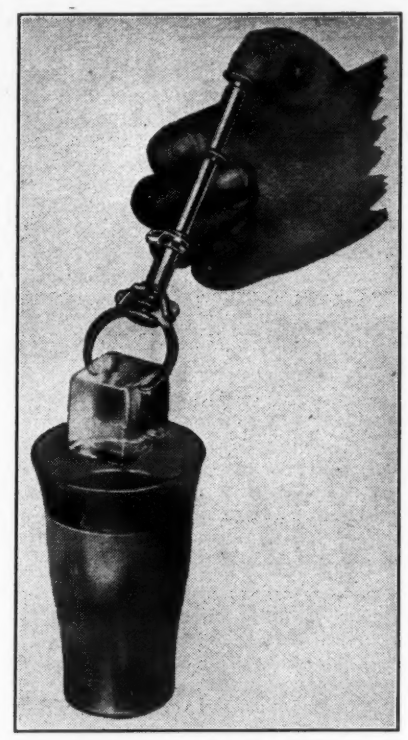
R. M. A. Convention Opens June 6

CHICAGO—The ninth annual convention of the Radio Manufacturers' Association will be held here June 6. There will be no trade show in connection with the meeting.

Tentative reservations for the meeting have been made at Stevens hotel.

The convention will coincide with the opening week of the Century of Progress exposition and also with the meetings of The National Association of Music Merchants and the Edison Electric Institute.

Ice Cube Tongs



New 'Utili-Tong,' combination ice cube tong and bottle opener.

* * *

Paulson To Make Ice Cube Tongs

CHICAGO—Just placed on the market as a kitchen and bar appliance is a new combination ice cube tong and bottle opener produced by Henry Paulson & Co. here. It has been given the name "Utili-Tong."

The Utili-Tong is a metal cylinder containing a spring to which are attached two cube-gripping prongs When a small button at the top of the device is pressed, the tongs separate sufficiently to surround an ice cube. When the button is released, the tongs grip the cube until it is released by further pressure on the spring.

The bottle-cap opener is attached to the stem of the tongs.

Overall length of the Utili-Tong is less than that of an ordinary lead pencil, and the cylinder containing the spring is only slightly larger than a pencil. The entire device is chromium-plated. It is priced to retail for $1.00.

16,809,562 U. S. HOMES EQUIPPED WITH RADIOS

NEW YORK CITY—With 16,809,562 American homes now equipped with radio, the percentage of all homes in the United States now having radio sets is 56.2, according to a survey made by *Radio Retailing*, the Columbia Broadcasting System, and leading radio manufacturers.

Between April of 1930, when 40.3 per cent of all homes were equipped with radios, and January of this year, 9,000,000 sets were sold, investigators found.

Of this number, approximately 4,760,000 sets were sold to persons not already radio owners, while the remainder were sold as replacements or for export.

Southern states showed the greatest increase in percentage of radios purchased since April, 1930, although these states are still below other sections of the country in radio ownership percentage.

Farrar First To Qualify As Frigid Airman

NEW ORLEANS—No. 1 member of Frigidaire Corp.'s 1933 Frigid Airmen's club, made up of men who sell complete air-conditioning installations, is Charles S. Farrar, household sales manager for Electric Service Corp., New Orleans dealer.

Sale of equipment to New Orleans' Dr. C. A. M. Dorrestein brought Mr. Farrar this rank.

NORGE READY TO START WASHER PRODUCTION

DETROIT—Norge Corp. is now ready to begin production of the line of electric washers announced to the trade at the time of the annual distributors' convention held in Muskegon, officials have announced.

All but the motor unit and gears for the washers will be made in Muskegon Heights, it was stated.

KENNEDY CORP. CONSENTS TO FRIENDLY RECEIVERSHIP

SOUTH BEND, Ind.—The Colin B. Kennedy Corp., radio manufacturer, has consented to friendly receivership proceedings for conservation of the company's assets and an intended reorganization of the business.

NEW WESTINGHOUSE WASHERS MARKETED

EAST PITTSBURGH, Pa.—Westinghouse Electric & Mfg. Co. has recently introduced a line of new washing machines, with a retail price range of $50 to $120.

Model MK-3 is the agitator-spinner-dryer washer, formerly selling for $139.50, now priced at $120. This washer, equipped with water discharge pump, is finished in green and beige porcelain enamel inside and out. New pari-vane agitator gives gentle yet rapid washing action. Dryer revolves at 1,000 r.p.m. Movable turret permits discharge of water from spinner either into washer tub or into set tub.

Model HW-3 is featured by patented "finger touch" control. The pari-vane agitator starts and stops with the slightest touch of the finger. Capacity of this washer is 9 lbs. Corrugations on side of tub give old-fashioned washboard effect, increasing efficiency in washing operation. Wringer starts and stops at the touch of the finger.

The wringer frame is made of heavy cast iron, finished in porcelain enamel. Drain board reverses automatically as the direction of rotation of wringer rolls are changed.

Wringer swings into eight positions, and after each change of position, the rolls stop automatically.

Model FW-3 has a large-sized corrugated tub, 9-lb. capacity, finished in porcelain enamel inside and out. A reversible wringer swings to eight positions.

It is equipped with a pari-vane 4-fin agitator. Retail price is $70.

Model IW-3, an underneath agitator type, retails for $50. Balloon roll wringer is used. One control lever placed within convenient reach starts and stops agitator. There is also one control lever for starting and stopping wringer roll. The heavy corrugated tub is covered by special porcelain enamel. A full-powered motor, oversize capacity (¼ hp.) is used.

CENTURY BEGINS DIRECT MAIL ADVERTISING DRIVE

CEDAR RAPIDS, Iowa — Century Engineering Corp. here has released a nation-wide direct mail campaign featuring Century oil burners, according to M. D. McWilliams, vice president in charge of sales. The campaign consists of a four-piece series, one every 10 days, and is localized for each dealer.

Each mailing contains a personally addressed letter, with an eight-page folder.

The campaign has been based principally on previous direct mail which the company has undertaken each year, using tested copy appeals. The list has been made up by each Century dealer for his own community. It will be undertaken simultaneously in approximately 600 metropolitan areas.

NEW JERSEY ELECTRICAL LEAGUE DELEGATES MEET

NEW BRUNSWICK, N. J.—The New Jersey Council of Electrical Leagues held its quarterly meeting at the Woodrow Wilson hotel here April 6 with 25 delegates from seven member leagues present.

Representatives of two other leagues now in the process of formation reported that application would soon be made to the council for membership.

Presidents of organizations representing the electrical industry in all parts of the state reported on the activities of their local bodies and the programs included, in almost every instance, electrical shows, exhibits, and demonstrations, with particular emphasis on refrigeration.

Plans now in progress include refrigeration shows to be conducted this spring by the following leagues: Essex Electrical League, Newark; Electrical League of South Jersey, Camden; Electrical League of Northern New Jersey, Dover. The Trenton League is planning to hold a new electrical device exhibit April 12.

It was decided to hold a one-day convention of all state leagues under the auspices of the council, in Newark during the Essex Electric League show the first week in October, along lines similar to that held at Asbury Park last fall.

RADIO CORP. STOCKHOLDERS WILL MEET MAY 2

NEW YORK CITY—The annual meeting of the stockholders of Radio Corp. of America will be held May 2 at the main offices of the corporation here for the purpose of electing directors and acting upon the reports of the officers.

Stockholders of record at the close of business on April 12 will be entitled to a vote at the meeting.

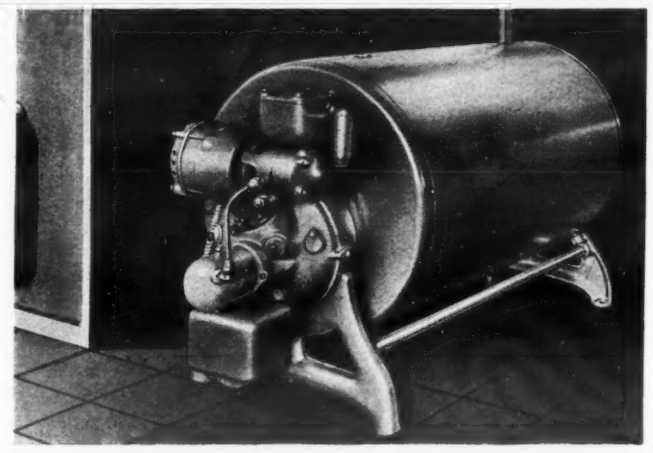
It's *easy* to sell things that save money!

THAT'S what Oil-O-Matic dealers have to sell in 1933—*actual, provable, money savings!* The world's most popular automatic oil heat for less yearly cost than hand-firing, and hot water supply for anywhere from 1-3 to 1-2 less cost than other methods!

NEW OIL-O-MATIC HOT WATER HEATER

Saves 1-3 to 1-2 the cost!

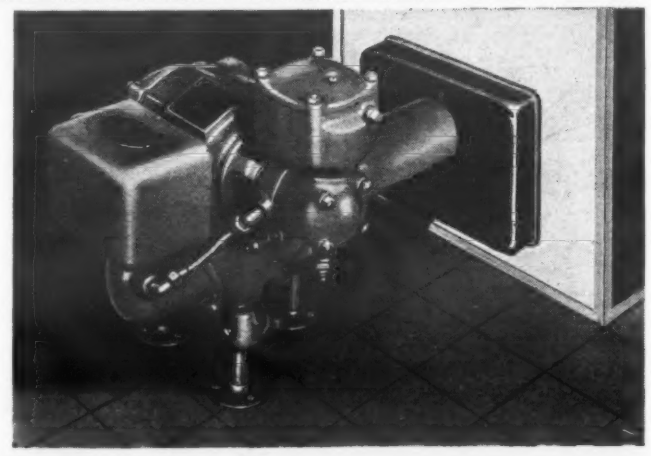
COMPLETE unit! Revolutionary in design and performance! Horizontal, with triple flame travel and heat-storing feature, and exceptional high-turbulence of water which achieves astonishingly swift heating. Automatically keeps water at any desired temperature—delivered at turn of a faucet. Capacity 50 gallons of water per hour raised 100 degrees or 70 gallons raised 80 degrees, with fixed oil consumption of ½ gallon of oil per *operating* hour. Burns any oil, down to the very heavy grades, same as all Oil-O-Matics.



NEW MODEL OIL-O-MATIC FOR SMALL HOMES

Lowest Price in History!

IDENTICAL in every principle and operating characteristic to larger Oil-O-Matics. Burns any domestic oil, same as larger Oil-O-Matics. Priced far below any other burner of comparable quality and performance . . . being installed in all territories at the astonishing figure of less than $300 complete with tank and controls! Destined to open a brand-new oil burner market for Oil-O-Matic dealers. Other new Oil-O-Matic merchandise for 1933.



SEND COUPON FOR FULL INFORMATION NOW

Williams Oil-O-Matic Heating Corp. ERN-4
Bloomington, Illinois

Tell me more about the Oil-O-Matic program for 1933.

Name .....

Address .....

City ..... State .....

My Present Business is .....

WILLIAMS OIL-O-MATIC HEATING

Listed as Standard by Underwriters' Laboratories

These New Frigidaires have put thousands of men to work

...AND PRODUCED ORDERS FOR THOUSANDS OF DEALERS

*A GENUINE FRIGIDAIRE FOR ONLY $96**

USES NO MORE CURRENT THAN ONE ORDINARY LIGHT BULB

THE NEW DE LUXE ALL-PORCELAIN FRIGIDAIRE

THE FINEST ELECTRIC REFRIGERATOR EVER BUILT

The demand for these new Frigidaires has been so remarkable that early in April, 6500 Frigidaire employees were back at work on full time. Frigidaire dealers from coast to coast—thousands of them—are reporting sales far ahead of expectations. What is there about the new Frigidaires that has created such an unprecedented flood of buying orders? Here, briefly, are the facts.

Frigidaire Sets New Standards in Price—The first major manufacturer in the industry to engineer from the ground up a quality refrigerator designed and built to sell for less than $100.

Frigidaire Sets New Standards in Economy—Nothing like it known before. Think of a refrigerator that uses no more current than one ordinary lamp bulb! Here is economy that will instantly appeal to every prospect. Here is a powerful sales weapon—tuned to the times.

Frigidaire Sets New Standards in Convenience—Look at the many new conveniences in this refrigerator. Automatic defrosting that saves time and trouble. Ice trays instantly released at the touch of a finger by a new patented device. Centrally located freezing compartment. Extra room for tall containers. A compartment for frozen storage. ¼ more food space. All are features that help make sales.

Frigidaire Sets New Standards in Beauty—A new and distinctive style in cabinets. Finished in gleaming, snow-white Dulux, the finest of non-porcelain finishes, and enhanced by chromium hardware. The interior is stainless porcelain. Here's eye-appeal—the all-important "first step" in every sale.

Frigidaire Sets New Standards in Quality—As in *all* Frigidaires, this model is quality-built throughout. From top to bottom, inside and out, it has the dependability that has made Frigidaire first choice of 2,250,000 buyers—a million more than have bought any other make.

★ ★ ★

Frigidaire Sets New Standards in De Luxe All-Porcelain Models
Equally sensational are the six superb new All-Porcelain models. They represent more progress in styling, engineering, construction and value than has been made in any single year during the history of the industry.

The Super Series Frigidaire has dozens of new and exclusive convenience features such as automatic defrosting, adjustable shelves, interior light, automatic ice-tray releasing, double Hydrator capacity, greatly increased ice capacity. Its beautiful cabinet has a smartness of style that is entirely new in refrigeration. And this new beauty, new convenience, new quality and new economy is offered at far lower prices than those for which All-Porcelain Frigidaires have ever been sold before. Frigidaire Corporation, Subsidiary of General Motors Corporation, Dayton, Ohio.

**$96 PLUS FREIGHT INSTALLATION AND FEDERAL TAX PAID*

Frigidaire

A GENERAL MOTORS VALUE

ADVERTISING AND SALES PROMOTION

Shadow Cut-Out Series Mailed to Prospects in Majestic Campaign

CHICAGO—To all prospects found in Grigsby-Grunow Co.'s "Friends of Majestic" campaign, Majestic electric refrigerator dealers are now sending a six-in-one mailing piece which its creators call a shadow cut-out series.

Three principal pieces of the set are intended to appeal to the children of prospects. One is a picture of a Majestic refrigerator, in front of which is a child drinking a glass of milk. Silhouetted against the refrigerator is the youngster's shadow.

Second piece is a Majestic refrigerator in front of which stand two crystal pilseners. Into the glasses, a woman's hand is dropping ice cubes, and the shadow of these things is shown on the refrigerator.

Piece No. 3 is a Majestic refrigerator, its door open to show the arrangement of foods. Before the unit, holding a large platter of roast meat is a daintily-aproned brunette housewife whose shadow is thrown against the refrigerator.

Each of the pieces may be folded, valentine-fashion, to make playthings for children, but tucked in the door of each refrigerator cut-out is a small folder for the parents which explains advantages of electric refrigeration.

On the back of each cut-out are printed two other appeals to prospects. One is an illustration of a Majestic refrigerator, and more chatty text on Majestic features. The other is an invitation to visit the dealer's store and get a children's picture cut-out book.

ICE-O-MATIC USES SALES PROMOTION PHOTOGRAPHS

BLOOMINGTON, Ill.—Williams Oil-O-Matic Heating Corp., manufacturer of Ice-O-Matic electric refrigerators, has prepared a packet of photographs of various models in its refrigerator line which it is supplying to its retail outlets for use as sales promotional material.

Each model is pictured against a black background on a separate sheet of glossy paper approximately 7½ in. by 4½ in. in size. A small insert photo in the lower right corner of each sheet shows the interior of the model pictured above.

On the back of each sheet are key specifications of the model shown on the front. In addition to the sheets picturing and describing the various models are two others which illustrate and point out features of the Williams' units.

Sales and Deliveries *Quickened* with Larkin 3-Point Warehouse Service

Now Over 38,000 Larkin Coils in Daily Use

YOU can get LARKIN standard COILS in less than 24 hours to any point east of the Rockies as the result of complete stocks of 95 standard models and sizes available through Brooklyn and Chicago Warehouse arrangements.

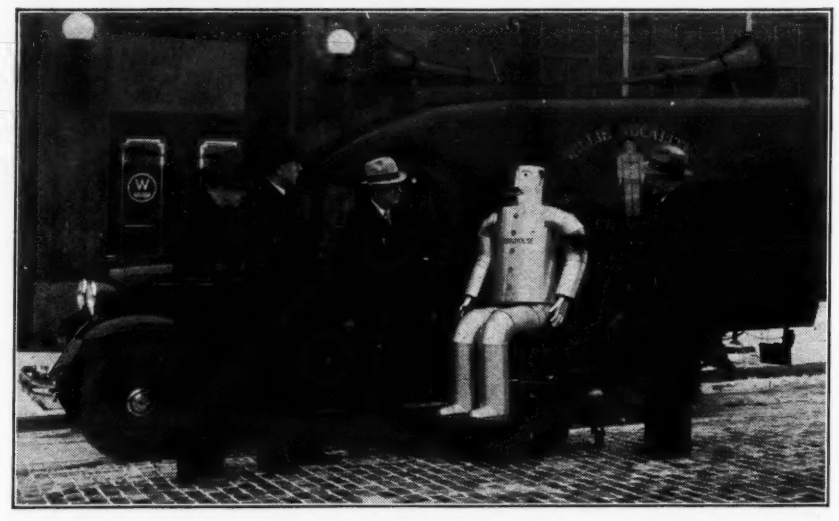
This service is a decided selling aid to manufacturers, Distributors and Dealers and keeps pace with growing demands for this great line. (Special size COILS for every purpose—only from Atlanta).

STANDARD FACTORY EQUIPMENT WITH

COPELAND : SERVEL : WILLIAMS ICE-O-MATIC : CARRIER - BRUNSWICK - KROESCHELL : MAYFLOWER : UNIVERSAL : KULAIR : ZEROZONE : M & E : MODERN : STARR : MOHAWK : APEX : DICELER : LIBERTY : H. M. Robins Co., *Export and Others.*

LARKIN
Refrigerating Corporation
Originators and Manufacturers
ATLANTA, GA., U.S.A.
BROOKLYN - CHICAGO
U.S. PATENT No. 1,776,235.

Willie Vocalite Goes on Road



S. H. Pittman, merchandising advertising manager; A. D. Caddell, manager of Mansfield chamber of commerce; and Mayor C. M. Lantz bid Willie Vocalite and his operator, C. L. Kirkpatrick, farewell before start of a tour.

'The Lesson of Beer'

NEW YORK CITY—The following illuminating study of consistent advertising, "The Lesson of Beer," is taken from the *Wedge* of Batten, Barton, Durstine & Osborne, advertising agency:

"Fifteen years ago, the name of any good beer was a household word. Every beer drinker had his favorite brew. Several makes of beer enjoyed national prestige. Yet that reputation and good-will have mostly disappeared.

"Tests prove that few people under 35 know very much about beer. The old names are forgotten. Pabst once meant an amber bottle of good cheer. Now it means cheese to many. Schaefer was one of New York's favorites for almost a century, but has 13 years of near-beer to live down. Ruppert once ruled Beerdom in the East—now he is Babe Ruth's boss. Doelger, Anheuser-Busch, Schlitz, Budweiser, Lemp, Bass, Burton—once symbols of slightly sinful but delightful indulgence—are now barely memories.

Example of What Happens

"Beer offers a perfect example of what happens when advertising stops. It will be interesting to study the efforts of breweries to win back their prestige and rebuild the market.

"It has been estimated that it will cost more than one hundred million dollars to re-establish these great beer names. Even the existence of a real beer market remains to be demonstrated, for a post-graduate course of prohibition gin may have changed the public taste more than we realize.

Serious Loss Results

"A great many concerns have found it expedient, in the past three years, to curtail or stop their advertising. In many cases, the decision to do so was unavoidable. But in every case that we have been able to check, a serious loss has resulted. The goods move more sluggishly. Consumers are less inclined to insist. Competition finds it easier to break in. Exclusive agencies are less in demand and dealers are more indifferent or independent. One can trace a progressive erosion of salability.

"Of course, being an advertising agency, we are in favor of advertising, believe in it, and consider that only desperate conditions justify cutting it out. So possibly our opinions on the subject should be discounted as being prejudiced.

"But it seems to us highly important that any concern whose sales are based on the known reputation of its product should look into the matter seriously and find out just how far the product has slipped. It would be dangerous, we think, to assume that its standing is unimpaired.

"A good many things have happened in the past five years. Towards the end of the New Era, prices increased rapidly. Many articles were sold for more than they were worth. We carried into the depression an uneasy feeling that we had been suckers. That didn't increase our confidence in the goods we had bought. Then, when prices began to tumble, we lost all sense of values. If we paid $75 for a suit of clothes in 1929, and bought a suit in 1930 for $40 which seemed just as good, reputations kind of got lost in the shuffle.

Preference Shaken

"When they began to put out cars for $1,000 that seemed in every way equal or superior to one you had paid $2,000 for, your preference for a certain make was shaken.

"So when the manufacturer in whom you had believed for years stopped advertising, it was natural to assume that he had seen the error of his ways and had dropped out of the race. And if a more confident competitor had taken advantage of the opportunity to win your interest and confidence, you found it easy to switch allegiance.

"Another point should not be overlooked. Each year, about two million youngsters reach an age when they begin to be interested in and influenced by advertising. When advertising has been stopped for three years, it means that there are six million adults in the country who have never seen an advertisement of the product.

25 Million Newcomers

"Something like 25 million adults in this country have never seen a respectable name on a bottle of good beer. And of course an almost equal number of old-time beer drinkers have died.

"A market is a procession of people. The movement is so slow that it is easy to fall into the error of assuming that a product is firmly established for all time. But without continuous development, that segment of the market which you have secured is inevitably dissolving at one end and is not being built up at the other end.

"Do you know whether or not Sapolio is still made—or Pearline, Sorosis and Queen Quality Shoes, Waltham Watches, Porosknit Underwear, Sozodont, Jordan car, and dozens of other products once great?

"We are reluctant to prophesy what effect the New Deal is going to have on business. The New Era was a lesson to us. But we sense in the minds of consumers a desire for a New Confidence. We think many people are tired of bootleg values. They would like to believe again in what they buy.

"We do know that the public is in a mood responsive to honest and factful advertising. Several of our clients have scored successes recently which would have been notable even in the easy twenties.

"Drifting has always been easier than poling against the current. We drifted all through the pleasant twenties—and went over the dam. Speaking very generally, it seems to us that the time has come to start working up-stream. Reputations won in these difficult times will be powerful in the days to come.

"Thirteen years of enforced inertia pretty nearly wrecked the beer industry. Three years of inertia haven't done your industry any good. But the opportunity to save your share of it is excellent."

LEONARD ARRANGES FOR LOCAL ADVERTISING TIE-UP

DETROIT—To provide a local tie-up with the national advertising of the Leonard Refrigerator Co. in each of its distributor cities, A. M. Taylor, director of merchandising, has arranged with the American Telephone & Telegraph Co. for a combination listing in local telephone books under the heading "Refrigeration—Electric," he announced.

The listing carries the name Leonard and 25 words descriptive of the Leonard line, with the name of the distributor directly beneath.

"An arrangement has also been made through which representatives of the local telephone companies will contact all dealers and solicit their listings," Mr. Taylor said. "These are to be placed under the distributor's name in each case.

"Our theory is that many a reader of national advertising becomes partially or wholly sold on a product before contacting any dealer. The reader wishes to know where it can be purchased and the telephone book is the accepted reference source for identifying the nearest outlet.

"This is the only means of dealer identification possible in national advertising—and all our magazine advertisements carry a reference to the telephone listing of dealers."

REINHARD BROS. USES TWO APPLIANCE DISPLAY CARS

MINNEAPOLIS—Reinhard Brothers Co., Inc., Norge distributor here, has just purchased two display cars which will be used primarily for displaying to prospective dealers in the northwest territory the Norge refrigerator and other appliance lines handled by the distributing organization.

Each of the two cars carries two Norge refrigerators, a Norge condensing unit on a display stand, an ABC washer, a Sigwald oil burner, and one console- and three table-type models of Atwater Kent radios.

WISWELL USES TRAILER TO DEMONSTRATE LEONARDS

CHICAGO—For the purpose of taking the story of electric refrigerators to the doors of dealers and prospective dealers, L. C. Wiswell Co., Chicago Leonard distributor, has placed on the road a travelling showroom in the form of a roadster-drawn trailer.

The trailer, inside, is 6½ ft. wide and 18 ft. long, affording room for a representative display of refrigerators.

B.B.D. & O. MOVES CHICAGO OFFICE

CHICAGO—Quarters of the Chicago office of Batten, Barton, Dustine & Osborn, Inc., advertising agency, will be moved April 10 to the LaSalle-Wacker building, 221 North LaSalle St. here. The office will occupy the entire twenty-seventh floor.

BOYNTON JOINS STAFF OF CAMPBELL-EWALD

DETROIT — Walter Boynton, formerly vice president of Unwin-Boynton & Stocker, Inc., advertising agency for Commonwealth Brass Corp., has left that organization to become a member of the publicity department of Campbell-Ewald Co.

Announcing The NATIONAL ELECTRICAL EXPOSITION for 1933

RADIO, REFRIGERATION, AIR CONDITIONING, DOMESTIC and INDUSTRIAL APPLIANCES

Sponsored by

The ELECTRICAL ASSOCIATION OF N. Y., Inc.

COMMITTEE ON ARRANGEMENTS

D. W. MAY, *Chairman*
President, May Radio & Television Corp.
J. H. McKENNA, *Vice-Chairman*
Eastern Sales Manager,
A. J. Lindemann & Hoverson Co.
T. H. JOSEPH
Advisory President, E.-J. Electric Installation Co.
H. C. CALAHAN
N. Y. Manager, General Electric Supply Corp.
J. J. DONOVAN
General Manager, Air Conditioning Division,
General Electric Co.
B. R. GATES
Eastern Manager, Premier Vacuum Cleaner Co.
E. G. INGRAHAM
President, Allen-Ingraham, Inc.
A. LINCOLN BUSH
Treasurer, Commercial Radio Sound Corp.
E. J. HEGARTY
Eastern Merchandise Manager,
Westinghouse Electric & Mfg. Co.
H. LINDE
President, Triangle Radio Supply Co.
RALPH NEUMULLER
Managing Director,
Electrical Association of New York, Inc.

WHEN? September 20th to 30th, Inclusive, 1933. WHERE? Madison Square Garden, New York City.
WILL YOU BE THERE? A complete folder, showing floor plans of exposition space, costs, etc., is yours for the asking.

Write to* JOSEPH BERNHART, *Manager
National Electrical Exposition, Madison Square Garden, New York, N. Y.

1933 WILL REWARD COURAGE

18 MICHIGAN FIRMS HANDLE GRUNOW LINE

DETROIT—Eighteen retail outlets for Grunow electric refrigerators in Detroit and eastern Michigan have been franchised by the Specialties Distributing Co., Grunow distributor in this territory, according to Leonard Turnbull, president of the distributing organization.

Dealerships, and the cities in which they are located, are as follows: Crowley Milner Co., department store, Peoples Outfitting Co., Weil & Co., Reliable Furniture Co., and Dupraw's, all of Detroit. Hardy Music Co., Bay City; Jager-Asmus Hardware, Wyandotte; Kimball Radio Studio, Port Huron; Jury Rowe Co., Jackson; Bishop Co., Lansing; Winegarden Furniture Co., Flint; Grigwire Music House, Midland; J. Art Lovell, Dexter; Uphouse & Schroen, Saline; Arbaughs, department store, Lansing; J. George Fischer & Son, Saginaw; Calkins-Fletcher Drug Co., Ann Arbor; and Radio Studio, Pontiac.

WESTINGHOUSE DEALERS ATTEND TAFEL MEETING

CINCINNATI—More than 50 Westinghouse refrigeration dealers from this area attended the spring convention of the Tafel Refrigeration Co., distributor in Cincinnati, Louisville, Knoxville, and Nashville.

Westinghouse's spring showing plans were presented at the meeting which was held in the Cincinnati club. J. S. Kelly, vice president of the Tafel organization, acted as chairman of the meeting.

Speakers on the program and their subjects included: J. Johnston, central district supervisor, who discussed the market in Cincinnati; R. M. Beatty, "The Psychology of Refrigeration Selling"; Douglas Via, Tafel's wholesale sales manager, commercial refrigeration; J. E. Hugo, central district sales promotion manager, promotional and advertising activities; and S. M. Davison, assistant to Westinghouse's refrigeration division manager, new sales presentation.

ELECTRICAL ASSOCIATION HAS REFRIGERATION SHOW

PHILADELPHIA—Under the sponsorship of the Electrical Association of Philadelphia, an electric refrigeration show is being held at the Edison building all this week.

Frigidaire, General Electric, Kelvinator, Leonard, Westinghouse, Majestic, Norge, Gibson, Mayflower, Coldspot, and Electrolux refrigerators are on exhibit.

An electric refrigerator listing at $250 will be awarded to the Philadelphian submitting the cleverest last line to a limerick which is appearing in newspaper advertisements of the show.

Two-column advertisements, measuring 400 lines each, will appear in all Philadelphia newspapers during the week. Each advertisement will include a limerick, which must be completed by the reader and delivered personally to a desk on the floor of the show.

Kelvinator Corp. Sales Increase 10%

DETROIT—Kelvinator Corp. reported April 5 orders for immediate shipment, received since the government began to permit the reopening of banks, as showing more than a 10 per cent increase over the corresponding period of last year.

On April 1, 1933, there were on file 2.8 times as many unfilled orders as on the same date a year ago. As a consequence, company officials announced that they have been recalling old employes to work and have returned to a full factory schedule of five and a half days a week.

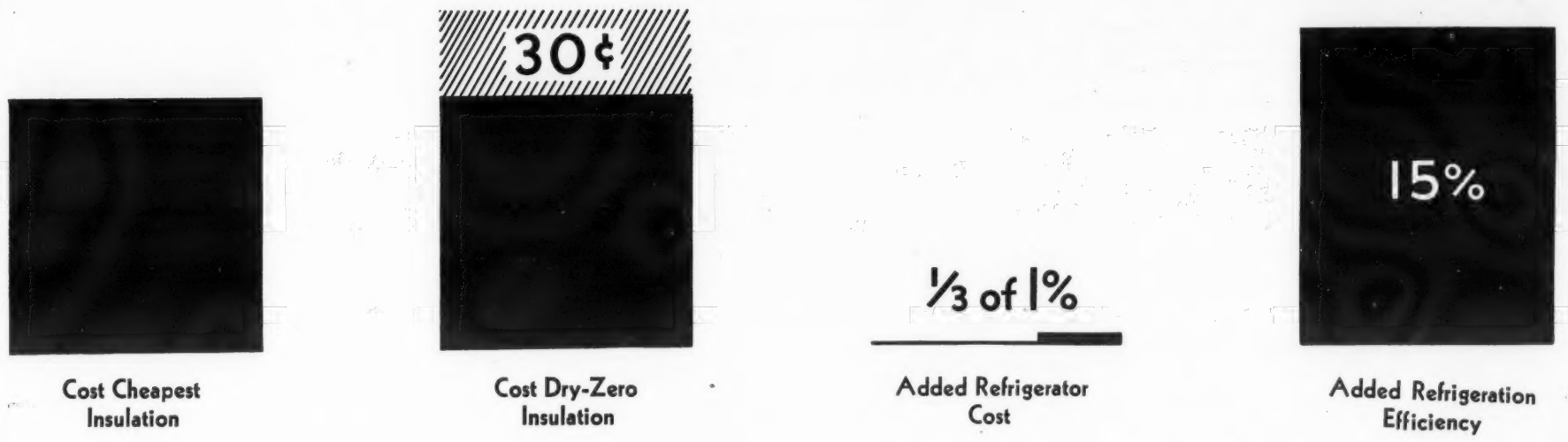
HARTEN-KNODEL CONDUCTS WEEKLY SALES SCHOOLS

CINCINNATI—Harten-Knodel Distributing Co., Norge distributor here and 1932 winner of the Major Blood trophy for outstanding distributor achievement, is conducting a series of semi-weekly sales schools for old and new members of its dealer organization and retail salesmen, according to Ray P. Harten.

GIBSON SALES FOR THREE MONTHS UP 22%

GREENVILLE, Mich.—Sales of Gibson electric refrigerators from Jan. 1 to March 31 of this year were 22 per cent greater than for the same period in 1932, according to Charles J. Gibson, president of the Gibson Electric Refrigerator Corp. The Gibson factory is now working on a night-and-day schedule, says Mr. Gibson.

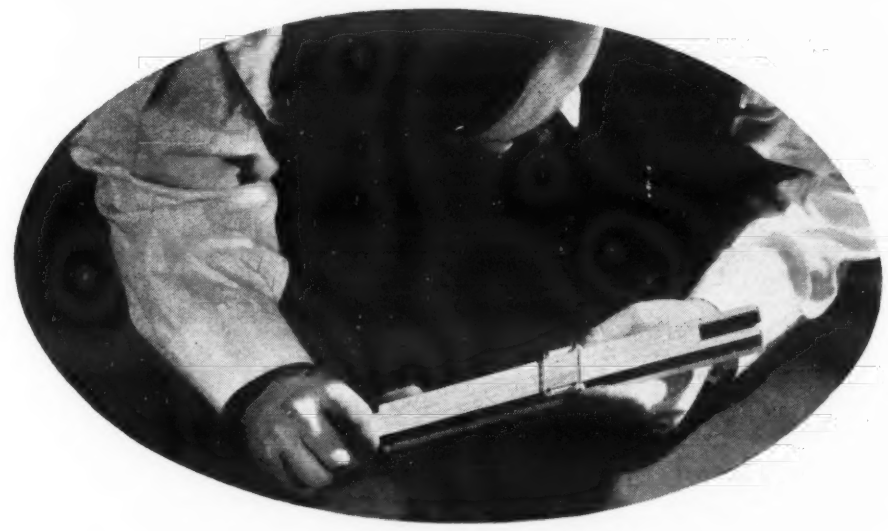
Would you spend 30¢ to make your refrigerator 15% better?



The finest refrigerator insulation available costs not over 30c more than the ***poorest*** and ***cheapest*** insulation for a 4 cu. ft. net job.

But the extra 30c—not more than 1/3 of 1% of the price of the refrigerator—will add at least 15% to the efficiency of the refrigerator using the ***next best insulation.***

Compared with still poorer insulants the improvement is as much as 40%.



We are emphasizing these facts now to those who sell refrigerators because the mad scramble for cheaper and cheaper boxes makes it imperative that they be faced. For when dealers and distributors are clamoring for lower and lower prices, it is natural to try to cut costs on unseen, even though vital, parts. This in turn becomes a menace to the dealer's own business. And the vicious circle is started.

Dry-Zero insulation will improve ***any*** refrigerator built today with ***any*** other kind of insulation at least 15% in permanent performance. And this statement can be proved conclusively.

The sales forces of the electric refrigeration industry are as vitally concerned with these facts as the manufacturing departments. They must build their own businesses on consumer good will. Nothing creates consumer good will like proven merit. Before you sell a refrigerator you can clearly determine whether it will give good or poor performance in Mrs. Jones' kitchen for the next two or three years. A refrigerator that keeps food cool, through hot summer weather, year after year, at low operating cost, is the one that brings praise and makes your success permanent. Such performance is impossible without good insulation.

» » » « « «

Anyone in any phase of the industry who is genuinely interested in its future is cordially invited to inspect the work being done at the Dry-Zero Laboratory. Here the performance and permanence of electric refrigerators is being clearly and graphically demonstrated. Dry-Zero Corporation, Merchandise Mart, Chicago, Illinois. Canadian Office: 687 Broadview Avenue, Toronto.

THE MOST EFFICIENT COMMERCIAL INSULANT KNOWN **DRY·ZERO**

ELECTRIC REFRIGERATION NEWS

The Newspaper of the Industry

Published Every Week by

BUSINESS NEWS PUBLISHING CO.

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Public Utility Merchandising

PUBLIC UTILITIES in the last year or so have done a first-class job of regaining trade esteem and good will.

Two years ago at this time almost everybody from major distributors in important cities down to dealers in small-town hardware stores were crying out against the "unfair competition" which they believed they were suffering from central station merchandising departments.

This wrath accumulated and festered until in a number of states bills were introduced in the legislatures, sponsored by associations of retail merchants, to prohibit public utilities from selling appliances. Caught with their guards down, power company executives were chagrined to learn that prohibitory legislation had been passed in Kansas and Oklahoma. In other states, sometimes after bitter fights, these bills were killed.

Large Retailers vs. Utilities

Department stores and furniture stores, and similar large retail outlets, were leaders in the fight to forbid utilities the right to build load by selling appliances. These large retail outlets were very much in the saddle last year. They were being cultivated assiduously by manufacturers of refrigerators, as well as other household devices. Apparently they had the utilities backed into a corner. Things were coming pretty much their way.

Today the pendulum seems to be shifting back toward the central stations. Specialty distributors and dealers, and small retail merchants, learned last year that utility competition—at its price-cutting worst—was not so fearsome as the special sales at ruinous prices sponsored by the big retail outlets. They remembered that the vigorous promotional campaigns which utilities formerly sponsored made an umbrella under which all could stand. And some of them have begun to long for the "good old days" in which utilities, albeit they may have sold plenty of merchandise themselves, helped keep the appliances on their lines in running order.

Sentiment Shifting

General business conditions in 1932, in addition to the threats of retailers, contributed to the merchandising retrenchment programs of the utilities. Holding companies, many of them, were in tight spots; and needed all the help they could get from operating companies. Sales forces were cut to the bone, or eliminated.

Although much remains to be cleaned up, financial condition of the central stations is now said to be brighter. Moreover, power company executives, distressed by their load shrinkages, are pressing for funds to be applied to load building. They are pointing with alarm to the dropping off in sales of all appliances last year, and making it clear that one reason for this loss of volume was the failure of utilities to wage their customary aggressive sales campaigns.

Another factor which is influencing top men in utility circles to reverse the trend and return to active merchandising is the renewal of agitation for municipal power plants, combined with drives for lower rates in cities where locally owned central stations are not being considered.

Increasing the Domestic Load

Lower rates, they believe, would stop both movements. By building loads they can reduce rates. Industrial expansion seems to be a bit distant, they don't think they can do a great deal about increasing the commercial load. Domestic load, however, is susceptible of expansion. It is upon that possibility that many dealers are working.

Some manufacturers welcomed the turn of the tide from utilities to department and furniture stores, because they had found the utilities "tough" customers. They have now learned that the big retailers can be just as hard to deal with, and more so. As price chiselers, department stores have no equal; and in the past some of them have been willing to take refrigerators made by irresponsible manufacturers if they couldn't get the quotations they wanted from reliable makers.

Utilities Sponsor Good Products

Utilities, of course, won't put a sub-standard machine on their lines if they have their way about it. Retailers appreciate that as well as manufacturers, for both have been hurt by the competition of the "fly-by-nights." Which is another factor in the return to favor of central station merchandising departments.

Because the movement back toward utility merchandising has been gathering momentum slowly, it does not seem likely that the power companies will be so large a factor in the refrigeration industry as they were in years previous to 1931. It is indicated, though, that they may be more prominently in the picture during the remainder of 1933 than they were last year.

Rate Reductions

LOWER rates for domestic customers of public utilities are said to be more than a remote possibility in a number of quarters today. Several strong central stations, it is reported, have taken under advisement the question of increasing their domestic load by reducing the rates on the current used by home and apartment dwellers.

Most power companies have production capacities far in excess of their present loads, and are in a position to lower their rates economically—should such reductions result in boosting consumption back to former levels.

Manufacturers of electrical appliances, of course, are lending all the support they can give to the idea. Lower rates, they feel sure, will mean more sales of refrigerators, ranges, washers, vacuum cleaners, and other devices. And, they point out, the additional load that greatly increased use of electric appliances will bring might more than compensate the central stations for the loss they would assume in reducing their charges to present users.

Perhaps one of the chief obstacles to the sale of electric ranges, especially in the rich New York market, has been high rates. A reduction might start a boom in that industry. Again, the new air-cooled Electrolux gas refrigerators would undoubtedly be converted into an electric refrigerator and pushed actively as such should rates come down.

All electric refrigeration manufacturers would have a new and better economy story to tell. Comparative costs with ice would be more favorable. The possibilities are as numerous as they are interesting.

Candid study of the situation may reveal that it would be unwise for central stations to run the risk of reducing their incomes at this time. Should they decide otherwise, however, it should undoubtedly be a decided stimulus to the entire electrical appliance industry.

LETTERS

Guarantees

Grigsby-Grunow Co., Inc.
5801 Dickens Ave., Chicago, Ill.
April 15, 1933.

Editor:

I was surprised to note in your correspondence colume that someone in your office in answer to an inquiry stated that "G. E." was the only well known manufacturer giving a long time guarantee. I cannot understand this unusual lack of accuracy on the part of your paper.

As you should know, Majestic today is the *only* company offering a three-year guarantee providing for free service. As I understand G. E.'s policy, after the first year a charge is made for service under their service contract.

CHARLES R. KLOPP,
Field sales manager.

Editor's Note — General Electric policy is to make no charge for service on the Monitor Top during the four years of the guarantee period, according to Caswell, Inc., Detroit G. E. distributor.

Carrene

Grunow Corp.
4127-4153 George St., Chicago, Ill.
April 14, 1933.

Editor:

Not with a view of starting any arguments in the columns of your excellent publication, but with a very definite view of correcting an inaccuracy, which I am certain is unintentional on your part, I would like to present the following facts:

By the way, this refers to your story on page 2 of ELECTRIC REFRIGERATION NEWS of April 12 in which you state, "So they pointed out that Carrene*** threatened to start a counterstink*** and they got Carrier to persuade Grunow to call off his dogs." To state the case in a nutshell, if we had any dogs at large, nobody has called them off—possibly one or two mastiffs have been added to the pack.

In other words, our entire advertising and merchandising program has been carried out as originally planned. It was only in the minds of a lot of very scared gentlemen that we were knocking other products and attempting to start a fight. We are actually gentle folk here; and the advertising we are doing is just exactly what we planned to do from the first. None of our copy has been toned down and none of it has been re-edited—some of it has been slightly strengthened at the request of our distributors and dealers.

It is unfair to state that somebody compelled Mr. Grunow to desist in something that, in the first place he never planned to do; and in the second place, when Mr. Grunow is determined to do anything he is not easily swayed from his purpose. That's the whole secret of his success; and he has always bucked the hardest sort of competition.

In regard to the manual you mention under "Reverse English," in the first place, Mr. Taubeneck, we do not use methylene chloride—we use CARRENE, so perhaps the gentleman was not referring to us, although you seem to feel that he was.

We have made exhaustive tests on our refrigerant, Carrene, which have satisfied us that everything we say about it is true. Of course, we expected some of our competitors to attempt to support the two-wheel brakes (which they could not change over to four wheels) and we even expected some of them to do it at any cost.

If the gentlemen in question are so sold on SO_2 why don't they come out and advertise it and talk about it? Probably the public would like to know that it is as safe as Carrene. (No charge for the suggestion.)

No, Mr. Taubeneck, we are not knocking anyone else's product in our advertising to the public. We are talking about our own. However, at the proper time if necessity demands stronger advertising copy we will endeavor to fit the copy to the circumstances and to the degree of necessity prevailing.

DUANE WANAMAKER,
Advertising director.

Editor's Note—We quote from the Grunow service manual: "Carrene, which is known chemically as methylene chloride . . ."

Product Wanted

Allied Manufacturers Ltd.
538 Howard St., San Francisco
April 6, 1933.

Editor:

The writer wishes to acquire the representation for the west coast and for the Orient and Australia for a good line of refrigerators.

He has had 25 years experience in the sale of electrical appliances and equipment in the above-mentioned territory where he is well and favorably known.

He can supply references from the most important purchasers also from important bankers.

We shall be pleased to have you refer us to reputable manufacturers who desire energetic and high grade representation.

We shall also like to have a copy of your magazine and would ask you to let us know the subscription price.

The writer can also place equipment which is available at a special price due to the discontinuance of the model or for other reasons. He could place orders immediately for several carloads of such equipment.

R. F. WHITEHURST.

1933 Slogan

Frigidaire Corp.
Dayton
April 13, 1933.

Editor:

After seeing with my own eyes the way people are buying in Cleveland and in Akron, Ohio, may I suggest a slogan for ELECTRIC REFRIGERATION NEWS:

"1933 is a Refrigeration Year."

From our standpoint, it's a Frigidaire year, but it seems to me the whole industry has a decidedly favorable outlook.

JIM IRWIN,
Publicity department.

Very Helpful

Syracuse University
College of Home Economics
Syracuse, N. Y.
April 13, 1933.

Editor:

Your publication, ELECTRIC REFRIGERATION NEWS, proved very helpful to our students last semester.

MARY FARNAM.

More of a Factor

Electric Association of Philadelphia
Architects Bldg., Philadelphia
April 8, 1933.

Editor:

Permit me to compliment you on the splendid paper you publish. Here in the "Bashful Quaker City" there is a big refrigeration job being done, which I have been watching for many years, and your paper is constantly becoming more and more a factor.

Let me take this opportunity to thank you and your entire staff for the splendid support you have given the industry here.

GEORGE F. CONOVER,
Managing director.

Recipe Books

Dominion Refrigeration Company
457 King St. W., Toronto, Canada
April 4, 1933.

Editor:

As we do not seem to be able to find any information in your trade directory, we were wondering if you could tell us if you know of any company who publish Recipe Books for electric refrigeration users.

We have a limited production of domestic boxes and feel it would be unwise for us to bring out a Recipe Book of our own but felt that there might be some company who market a standard one which would be just as useful for our purpose.

H. E. WOOLLEY.

Splendid Report

Utilities Engineering Institute
Chicago

Editor:

The March 29 number of ELECTRIC REFRIGERATION NEWS has just arrived, and as usual it is intensely interesting. My interest is just about equally divided in your splendid report of the A.S.R.E. meeting and in the very thorough report on beer dispensing equipment.

E. J. SORENSEN,
President.

Fair & Accurate

Liberty Refrigeration Corp.
Providence, R. I.
March 14, 1933.

Editor:

The writer personally has been a subscriber to your paper since its inception and desires to say at this time that no industry has ever had a fairer or more accurate disseminator of trade news. Be assured at this time that anything we can do to cooperate with you will be done to the best of our ability.

L. SHEERAN,
Superintendent.

Dentist Hurts Less

Household Utility Corp.
404 Clark St., Stevens Point, Wis.
Feb. 24, 1933.

Editor:

Depression or no depression, we thought we could get along without you pestering us every week.

But it's easier to have the dentist pull at one of our favorite "toothies" (and he charges three bucks for that pleasure), so slip us on your mailing list without missing another copy of ELECTRIC REFRIGERATION NEWS, and we will slip you the three bucks when your bill comes.

A. W. SCHEIN.

Proposed E.T.L. Test Code Inadequate Because Durability Is Omitted, Harvey Lindsay Declares

Dry-Zero Corp.
Merchandise Mart, Chicago, Ill.
April 7, 1933.

Editor:

During the past two years there has been much agitation for the establishment of electric refrigeration performance standards.

Behind this agitation has been the hope of developing a means of distinguishing the well-built, efficient refrigerator from the equally handsome but shoddily constructed cheap product.

Many have felt that the establishment of such performance standards would prevent or at least retard price cutting and the domination of low price as a sales factor.

This agitation has now resulted in the development of a tentative test procedure for mechanically operated domestic refrigerators by Electrical Testing Laboratories for the purposes of its work in the quality improvement program sponsored by the appliance committee of the Association of Edison Illuminating Companies.

Not Sufficiently Rigorous

The great danger in establishing such a system of standard tests is that they will not be sufficiently rigorous, permitting the seal of quality to be placed indiscriminately on all or nearly all products, thus nullifying its value.

To me, the Electrical Testing Laboratories procedure as outlined fails to avoid this hazard. In my opinion, it is entirely inadequate unless it were intended merely to be a meaningless gesture that will admit into the fold the goats as well as the sheep, which I am sure is not the case.

The procedure will not differentiate sufficiently between good and mediocre refrigerators. Failing in this, it will certainly fail to establish standards that will enable the public to distinguish between reasonably priced, quality products and poorly built, cheap refrigerators.

Will Not Safeguard Dealers

It will not safeguard dealers from selling, unknowingly, refrigerators of inferior quality that will perform unsatisfactorily and ultimately detract from the dealers' standings in their communities. It will not even provide the manufacturer with assurance that his products are of adequate quality for the protection of his own interests.

The most serious fault of the tentative Electrical Testing Laboratories' procedure is the failure to make adequate provision for the testing of refrigerator durability. The electric refrigerator is sold by dealers and bought by the public upon the theory it is a product that will operate efficiently for a number of years under adverse kitchen conditions.

Therefore, it is necessary that standard performance tests indicate the effect of such adverse conditions upon the performance of the refrigerator. Any test standard failing to do this is useless. In my opinion, the procedure proposed by Electrical Testing Laboratories falls in this class.

Unreliable Period

Comprising only a 24-hour test run—in itself an unreliable period—and entirely disregarding the cumulative effects of moisture under normal kitchen conditions, the procedure is meaningless because it fails to divulge the true merit of the product under conditions of use.

No rules of procedure for testing durability are provided by Electrical Testing Laboratories except the statement that "it is contemplated that the effects of time, including the effects adverse conditions of service, would be reflected in the results of tests made in accordance with this procedure, before the refrigerators were submitted to such adverse service conditions and after having endured them for a stated period."

Nothing is said regarding the control of such service conditions so that the same conditions may be fairly applied to all refrigerators tested. Unless this is done—and it can only be done in a laboratory where service conditions can be artificially reproduced and accurately controlled, since conditions in actual use can neither be exactly controlled nor accurately recorded—no durability ratings of any value can be obtained.

Evaluate Operating Qualities

The second serious objection to the test procedure set up by Electrical Testing Laboratories is the 24-hour period proposed for evaluating the operating qualities of any refrigerator at any given time.

The results of numerous tests conducted in the Dry-Zero Laboratory indicate beyond doubt that the best refrigerators vary somewhat in efficiency from day to day due to the complexity of the refrigerating mechanism.

Such day-to-day variations are apparently inevitable despite the most rigid regulation of all external factors. In fact, these variations are often so wide at the beginning of testing periods that the Dry-Zero Laboratory usually ignores the results obtained during the first two or three days of standard tests.

Examples of such variations are shown in the adjoining charts. For instance, suppose refrigerators A and B were compared for performance on the third day of the tests represented in the charts. The results would be diametrically misleading in that they would show refrigerator A to be considerably more efficient than refrigerator B, while, actually, refrigerator B proved to be vastly more efficient over the full 27 days of testing.

The experience of the Dry-Zero Laboratory indicates conclusively that 24-hour tests are almost invariably worse than useless in that they seldom show any conclusive difference between honestly built, good refrigerators, and poorly built, shoddy products.

Closed Refrigerator Test

As an alternative to the general performance procedure proposed by Electrical Testing Laboratories, I should like to suggest a standard closed refrigerator test that would provide specific ratings on both immediate performance and performance over a period of years.

During the past year, the Dry-Zero Laboratory has developed an accurate procedure of this type. Ratings are obtained in a relatively short time—15 to 30 days—by intensifying without distortion the factors encountered in actual service.

The standards used in the Dry-Zero Laboratory tests are the result of careful study of actual kitchen conditions in various parts of the country. For example, it was learned that in New York, summer before last, there were 54 days when the temperature exceeded 80° and 37 days when relative humidity was 85 per cent or more. It was also learned that in New York kitchens when cooking was going on during such days, both temperature and humidity were considerably higher.

Temperature and Humidity Factors

A mass of information such as this was used to obtain an accurate picture of the severity of kitchen conditions in various parts of the country. It was discovered that it is not at all uncommon in hot, sultry, or rainy weather to find kitchens of 90° and a relative humidity of 90 per cent.

These findings, plus an investigation of many refrigerators that had seen considerable service, indicated that high temperature and high humidity were the two prime factors affecting performance and permanence. Humidity was found to be the greatest enemy of durability.

It was discovered that there is practically no possibility of preventing moisture from entering the walls of a refrigerator cabinet under kitchen conditions; in the invisible form of water vapor it seeps through the "moisture seal," then condenses as water inside the insulated walls of the cabinet.

This, it was found, has an inevitable effect on the performance of the refrigerator, and with hygroscopic insulating materials causes disastrous inefficiency and even affects the life of the machine unit.

Intensified Conditions

Taking these things into consideration, the Dry-Zero Laboratory has established test room factors at 100° F. and 93 per cent relative humidity. A great many check tests have shown that this intensifies service conditions without distortion.

It is roughly estimated that 12 to 15 days of testing under such conditions approximates a summer's use in New York, Philadelphia, St. Louis, or Atlanta; two summers in Cleveland and Chicago, and perhaps three summers in Minneapolis.

Based upon all the foregoing information, I suggest that the following standards for a closed box test should prove satisfactory for arriving at fair and reasonable ratings of refrigerator performance and durability:

Closed Box Test

Room Temperature—100° F. Permissible variation 2° plus or minus, for 10 per cent of test.

Relative Humidity—93 per cent. Permissible variations 2 per cent plus, 4 per cent minus, for 10 per cent of test.

Average Temperature Inside Cabinet—40° to 45°. Average taken from at least the usual four points. Test results to be equalized to 42° on the capacity curve of the refrigerator for fine comparisons.

Minimum Duration of Test—20 days.

Measuring Instruments—Complete dual system of instruments, one set to be automatic recording. Intercheck twice a day.

All thermocouple and other wires passing out through cabinet door gasket to be made air current tight.

Coils defrosted in closed box tests every five days, with record, solely for equalizing purposes.

These general requirements, with proper minutiae, offer a simple means of rating performance and durability that should indicate clearly to all factors interested the actual performance value of every refrigerator, both when new and after an extended period of years in the average kitchen.

How such performance standards are to be used to the greatest benefit of the industry is another question. Despite the agitation for the establishment of such standards, there is no unified opinion as to how they are to be used.

Expose Intrinsic Value

It seems to me that as much thought should be given to this phase of the question as to the proper regulation of the tests themselves.

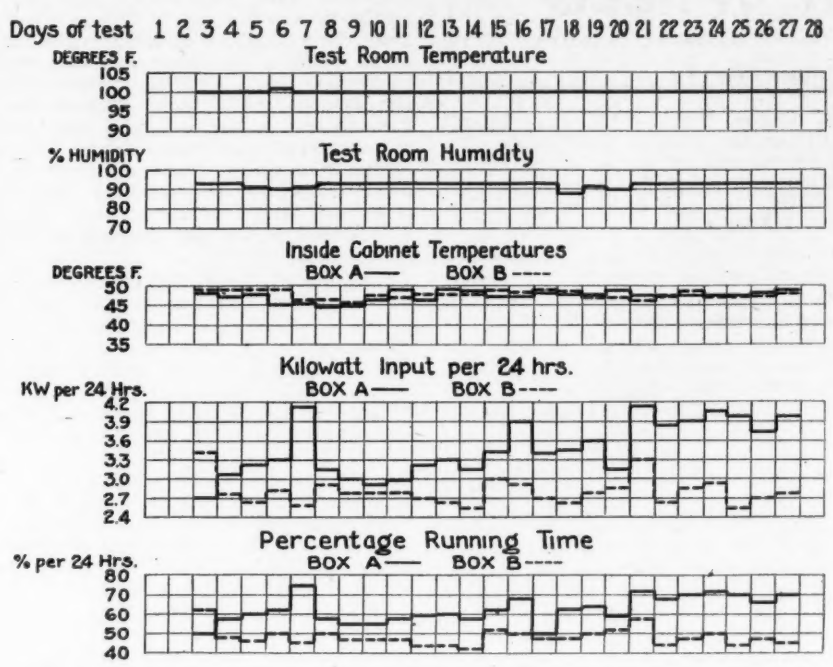
In any event, the many performance and durability tests made in the Dry-Zero Laboratory indicate test standards that expose the intrinsic merit of electric refrigerators, or lack of it, are badly needed for the benefit of the industry. Indeed, I feel such standards are needed more acutely at the present time than ever before.

Pending the establishment of definite performance standards for electric refrigerators, the Dry-Zero Laboratory is at the disposal of manufacturers genuinely interested in improving their products. Their own engineers are welcome—in fact, requested—to superintend or run tests on their products. The results of such tests are inviolably confidential to the manufacturer.

The same opportunity is gladly offered larger distributors and dealers until such time as competent test standards are commonly established in properly equipped laboratories.

HARVEY B. LINDSAY,
President.

Results of Dry-Zero Tests



The charts above show the results of tests conducted in two new refrigerators in the Dry-Zero laboratories over a period of 27 days.

Amelia Earhart Buys 18-Cu. Ft. Frigidaire

RYE, N. Y.—Mrs. George Palmer Putnam—Amelia Earhart—world's foremost woman flyer, recently purchased an 18-cu. ft. Frigidaire from the local dealer. Miss Earhart visited the showroom to make her selection.

Asked if the purchase meant she planned to take up the duties of a housewife, Miss Earhart replied:

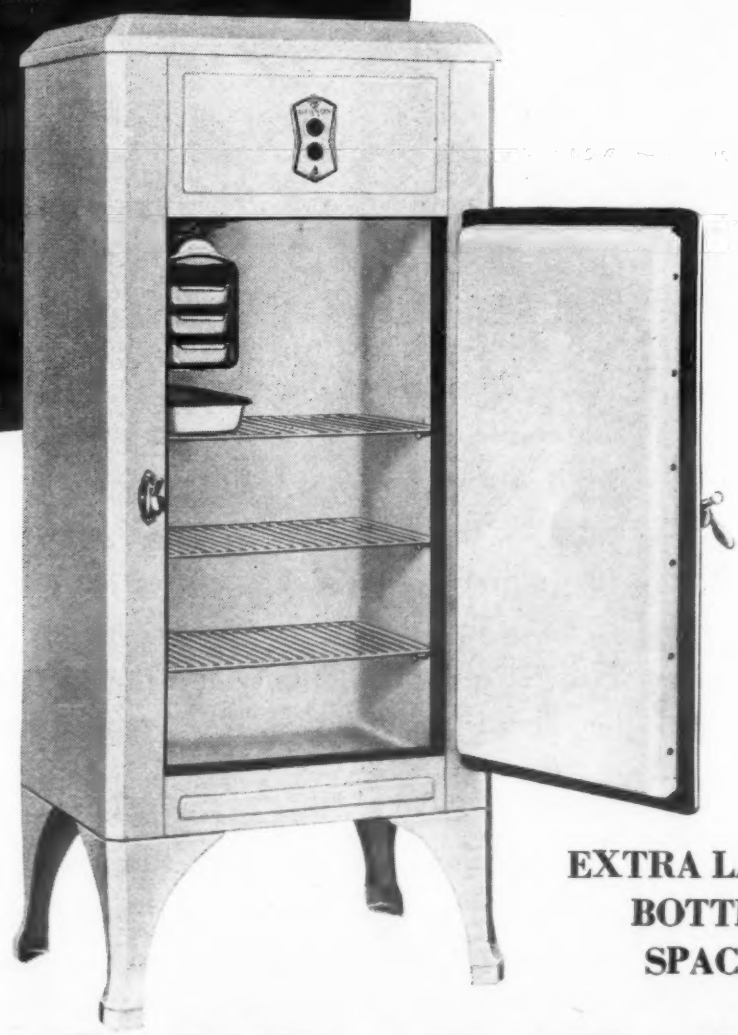
"Not at all. I plan to fly regularly just as I have in the past. But one must eat, even at home."

Marshall Plans Gibson World Fair Exhibit

GREENVILLE, Mich.—W. R. Marshall, director of advertising and sales promotion for the Gibson Electric Refrigerator Corp. here, returned last week from Chicago where he made final arrangements for an exhibit of the Gibson line at A Century of Progress exposition which opens June 1.

Here's a World-Beater for 1933

WRITE FOR PRICES AND GET A THRILL!



BIG ROOMY

Once more Gibson crashes through with the outstanding values of the year. Leadership is a Gibson habit!

There's a Gibson size for every family and a price for every budget. Right *now* is the time to get into the Gibson picture. Here's your opportunity to make real profits! Grab it before some one else beats you to it. Write, phone or wire for facts and figures. Prices that will astound you.

Model LH-49

	W.	D.	H.
Overall—	24⅛	22¼	56⅞

Capacity—4.71 cu. ft.
Shelf and floor area—7.41 sq. ft.
Ice cubes—63

EXTRA LARGE BOTTLE SPACE

OCCUPIES SMALL FLOOR SPACE . . . . THE IDEAL CABINET FOR APARTMENTS

GIBSON

THE MOST Beautiful REFRIGERATOR IN THE WORLD!

GIBSON ELECTRIC REFRIGERATOR CORP.
Greenville - Michigan

An Editor on Wheels

Stories of Interesting PLACES in the Refrigeration Industry

By **GEORGE F. TAUBENECK**

New York City

Included in the city of New York are the "boroughs" of Manhattan, Richmond, Queens, Brooklyn, and the Bronx. Manhattan is an island (its name means in the original Indian, we are told, "Drunken Place") connected to the other boroughs by a series of the largest bridges in the world.

Of these, the old Brooklyn bridge is probably the best known bridge in the Western hemisphere. You can cross the Hudson river into Jersey by bridge, tube, or the magnificent Holland Vehicular Tunnel.

Some 800 miles of subways, street cars, and elevated railways cart the seven millions of inhabitants, plus the thousands and thousands of visitors always in evidence, around the 300 square miles of stretched-out city.

A few thousands less than two and a half million persons live in the 22 square miles which is Manhattan. Many millions more work there. It's all done by the simple process of squeezing everybody up—up toward the sky in the world's tallest buildings.

Most famous streets in Manhattan are Wall Street, Broadway, Fifth Ave., Park Ave., Madison Ave., and Riverside Drive. Everybody knows, or has heard, about 'em.

The "Drive" begins at 72nd St. and wends its way with the Hudson river to Dyckman St., with a parkway separating its smooth course from the river. At 123d St. is Grant's Tomb, which is a granite affair with a cupola, surmounted by a pyramid, and entirely surrounded by tourists.

On the inside (east) of the avenue are ranged the swanky apartment dwellings, the original penthouses, and the residences of some of the most talked-about people in America. Across the river are the sheer-rising Palisades and New Jersey.

Madison Ave. is the locale of smart shops, of antique stores, of art salons, and of tony hotels such as the Biltmore, Roosevelt, and Ritz-Carlton.

Fifth Ave., of course, is also the address of any number of expensive places to buy things—or, if you choose, places to buy expensive things; the terms are mutually contributory.

Park Ave. is just about the best residential address in town today, with the possible exception of the "Drive." It's a development fostered, so they tell us, by mighty brainy and subtle promotion work on the part of the New York Central railroad, which owns much of the land.

Broadway and "the Roaring Forties" are synonymous. Actually Broadway is the longest street in New York, shooting from the Battery up as far north as Van Cortlandt Park. Halsted St. in Chicago and Woodward Ave. in Detroit are the only longer metropolitan thoroughfares. But the only part of it which really counts is the 10-block sector divided by streets numbering from 40 to 50, the "forties." Perhaps one should add the overflow into the early "fifties."

Within this compact area you'll find the cream of the world's amusement facilities, gamuting from cheap burlesque to intimate supper clubs which may soak you 40 bucks for your evening.

Broadway itself is made up of restaurants, movie houses, taxidance halls (stay away from from all but the Orpheum, a strictly respectable hall patronized largely by dress-suited Harvard and Princeton boys—who really marry the gals), orange drink and frankfurter stands, open-all-night book stalls, petty grafters and racketeers, and clothing shops—also the famous Astor hotel (where you meet your date) and the old pie-cut-shaped Times Bldg., round which circle in running electric letters the news flashes of the moment, and in front of which you can buy your home-town paper and mayhap see an old friend.

Legitimate shows, plays, and revues, are staged in theaters located on the "forty" streets at right angles to Broadway.

You can get tickets for the plays in your hotel, by Postal Telegraph, or at one of the ticket agencies (such as LeBlang's "cut rate" agency in Gray's drug store on Times Square)—but you'll pay a premium in so doing. Get your seats at the box office, preferably just *after* the first curtain call. In these days you can invariably get some of the best seats in the house right at the ticket window.

Broadway is the beginning and the end for showfolk. Its discoveries become the toasts and idols of a nation. Thus it is the beginning of great careers for many. It is also the goal of every six-a-day hoofer and every stock company Hamlet the breadth of the land; if they're good enough to get there, the world is theirs. And save for interludes in Hollywood, the best of them are prone to end their days within eye-and-earshot of the Main Stem.

Competition along the Mad Mazda Mall is keener and more bitter than almost anyplace else in the world. Long periods of "at liberty" punctuate successful careers; poverty is intermingled with grandeur, adulation, and crest-riding.

Perhaps the best show in town is the Grand Central Terminal, at 42nd St. and Park Ave., with entrances on Lexington and Vanderbilt avenues. You'll marvel at its starry-sky ceiling, its various levels and ramps, and the never-ending flow of humanity. From it you can enter the Commodore, Biltmore, and Roosevelt hotels—and can live and transact business for weeks, then leave town, without ever seeing daylight. It's more interesting by far than the famed corner of Broadway and 42nd, where you are supposed to see everybody you know if you wait long enough.

Pennsylvania Station, which would be the largest depot in the world were the Grand Central Terminal to be blown up by bombs dropped from raiding airplanes, is almost equally interesting. The Statler-operated Pennsylvania hotel is adjacent, while a tunnel leads to Ralph Hitz's popular New Yorker hotel.

* * *

Brooklyn

Brooklyn is often thought of as an independent city, which it isn't. Considered as a borough, it's the largest of the New York City divisions, with more than 2,600,000 inhabitants.

A great portion of New York's magnificent harbor belongs to Brooklyn, and some five dozen steamship companies operate from there. It ranks fourth in the United States as a manufacturing center, and handles 25 per cent of all the foreign commerce of the United States from the largest dock and warehouse systems in the world. Brooklyn Navy Yard is oldest and largest in the United States.

It has the second largest hotel in the world, the St. George, which boasts the biggest and finest of all indoor swimming pools. Brooklyn leads the world in the importation and distribution of coffee and sugar; also in the manufacture of quality women's shoes.

We indulge in the quotation of all these superlatives just to show that our heart is on the sympathetic side, for Brooklyn is said also to have the World's Greatest Inferiority Complex.

Manhattannites pan the life out of Brooklyn; indeed, they aver that there's no life there. True it is that Brooklyn lacks the shine and tinsel of Gotham proper; it is a city of homes and families and factories and stores (*not* shops). It's comparatively quiet and peaceful.

Portions of it are reminiscent of New Orleans and Boston—minus the glamour. Buildings are old, dark and smoky, jammed together, and rise precipitately from the sidewalks like the Hudson Palisades. At night they seem crafty and ominous and forbidding.

It's over here that you hear "r's" tacked onto syllables ending in "a"—such as "Asiar," "Africar," and "Chinar."

Incidentally, it furnishes the Rialto more chorus girls annually than any other portion of the world, including New Orleans and Kentucky.

Down in the Brownsville sector of Brooklyn is its Ghetto, where more than a quarter of a million Hebrews live within the space of a few square blocks. These are the orthodox Jews, the bearded and skullcapped variety. Most interesting spot down here is the market. Such haggling and bargaining! You should live so long to see it, Maw-russ.

Other interesting portions of Brooklyn are Coney Island (world's biggest and dirtiest amusement park), Bay Ridge residences, and Brooklyn Heights (Brooklynites refer to it as "*down* on the Heights!").

* * *

A City on Islands

Like Japan, New York is an island realm. Manhattan itself, as we have pointed out, is an island. Other important isles are Long Island, Staten Island, Ellis Island, Bedloe's Island, Governor's Island, Welfare Island, Swinburne Island, City Island, Hoffman Island, Randall's Island, Fire Island, and Hunter Island.

Hoffman and Swinburne islands are detention camps for incoming boat passengers. Randall's is the home of several city institutions, as is Welfare. Bedloe's is the site of the Statue of Liberty.

Governor's is headquarters of the United States Army. (Engineers have more than doubled the natural size of Governor's Island.) Ellis Island is the examination point for immigrants, and a drably colorful, sometimes pathetic, spot it is, too.

Staten Island is a good-sized piece of land where many well-to-do New Yorkers live, and where much truck farming is done. It is also the site of the Fort Wadsworth military reservation and coast defense works. An interesting place on this island is Sailor Snug Harbor, a home for old and ailing seamen. Excellent place to get model ships, authentic down to the last miz'nmast and for't'ps'l.

Long Island is one of the swellest places to live in the whole country. Millionaires have estates there, actors and artists and writers live there in colonies, and loads of mighty fine people who are neither millionaires nor artists have homes there, too.

The artist folk live chiefly in Freeport and Great Neck (which they call "Goitre"). On the South Shore are Rockaway Beach, Lido, Long Beach, and Atlantic Beach, top-notch bathing places. Lots of golf courses, greenhouses, kennels, and a private motor speedway that will gladden your heart, if you like to give the old bus the gun.

Among the interesting people who live on Long Island are several knots of professors from Columbia, New York University, and Fordham, and Manhattan College. These schools rank well up in the roster of American institutions of higher learning, and their professors—especially the Great Neckers—are notedly liberal in thought.

Forest Hills, scene of the national lawn tennis championships, is one of Long Island's most attractive residential districts. It's worth a drive, if you're on the island in a car. Flushing is a pleasant village, too.

* * *

Forty-Second St.

Salesmen of electric refrigerators are fond of declaring that you can save money for the easy payments by purchasing quantities of food on Saturdays at low prices, and storing them for several days in the refrigerator.

Should New York refrigerator owners wish to try the scheme, they need only mosey over to Ninth Ave. and traverse it, both sides of it, from 38th St. to 42nd St. They'll find there one of the largest public markets to be seen anywhere this side of the Orient—or New Orleans.

Pushcarts watched over by immigrant Italians, some of whom have glorious voices and will occasionally burst into a "Funiculi, funicula," when trade is dull, bear almost every variety of fruit and vegetable you ever heard of plus many which will be total strangers to you.

Seafoods, coffee, European candies, even toys are present in profusion. And how cheap everything is! Although the operators are piling their wares before dawn (so they tell us), best time to go is Saturday evening, or at night, when the carts are lighted by gas flares and firebrands.

The later you go, the cheaper the food. Also, the more chances you take with it. If you have to, though, you can fill your tummy for a week on a dollar's worth of food from this mart.

If you should walk down that way on a Saturday afternoon, when the lane is busiest and most colorful, do a left face on 42nd St. and walk up to Times Square. Those few blocks comprise a permanent street fair, with a sideshow in every other doorway.

Warner Bros. made a corking good picture with the title, "42nd Street," but it didn't tell you anything about this aspect of that famous artery of transportation.

Take, for instance, the renowned flea circus. Anywhere from a dozen to 69 fleas dance, race, and cut up acusingly. No kidding. They've actually been trained, and waltz through a few stunts of about the same calibre as, oddly enough, the elephant routine in a circus.

This same spot houses a crumby collection of freaks, Jo-Jo, Bearded Annie, the Human Skeleton, the She-Man, and the Walking Art Gallery included.

Up and down both sides of the street you will find barkers, some enticing strays into auction sales, some pitch men, some ballyhooing coin-machine clusters, others first-caste sideshow spielers. They're all after pennies.

Incidentally, two or three burlesque houses, including famed Billy Minsky's (who's trying to go Ziegfeld) are near the Times Square section of 42nd St.

Walking up the street toward Fifth Ave. the phony amusements fade into smart women's shops, especially shoe salons.

* * *

East Side

Lower New York, the New York of the Statue of Liberty and the famous skyline (you'll glimpse it in three out of seven movies) is about as disillusioning seen close-up as a lovely lady's skin viewed through a microscope.

Battery Park occupies the tip of the mainland. An aquarium of fair-to-middling interest, with a quantity of ungodly-looking sea beasts, sits there (once upon a time this little roundhouse was Castle Garden, where the Barnum-imported Jenny Lind sang); and just below it is the landing for the boat which goes to Bedloe's Island and the Statue of Liberty.

It's fun to climb up into the arm of the hollow goddess if your wind is still good; but it isn't much fun to look at her. She's greenish and scummy. The boat going over and back is generally lively. A trio of the strolling minstrel type—accordion, guitars, and bassless harmony—will probably entertain you.

The Fulton fish market is down in that region, too. You don't need the address—just follow your nose.

Also in the near neighborhood is another place you'll see often in the movies, especially in the newsreels. It's the colonial-type City Hall; and its spiral staircase is a thing worth seeing. Almost any minute, you expect,

(*Concluded on Page 15, Column 1*)

"What They Say" About You

¶ Industry "gossip" makes industry reputation. It is a powerful force constantly at work. What distributors, dealers, and salesmen say about a company is a factor which no manufacturer can afford to ignore.

¶ Throughout the refrigeration field there is a considerable group of active and influential men whose opinion of companies and products is constantly guiding the activity of many others who have a less intimate knowledge of the industry and its affairs. These men of leadership and experience are to be found in almost every community and their influence upon newcomers is very great.

¶ Industry gossip cannot be prevented, but it may be effectively guided. One form of effective guidance —indeed a certain means of *creating favorable* gossip— is through carefully planned and consistent advertising in ELECTRIC REFRIGERATION NEWS. Unstable concerns do not advertise continuously. Because of this very fact a manufacturer who does use consistent advertising is bound to create a reputation of reliability and stability for his concern.

¶ The importance of this favorable trade opinion cannot be over-estimated.

An Editor on Wheels

(*Concluded from Page 14, Column 5*)

a party of stately gentlemen with buckled knee breeches, white wigs, and tricornered hats will descend.

Today the Bowery pawnshops are booming. Perhaps not so much today as last March; but booming they are, and booming they have been since 1930. From Park Ave., from Riverside Drive, from families which used to eat from gold and silver services, those same services, together with vases, candelebras, grand opera jewelry, and heirlooms of all descriptions, are pouring into these At-the-Sign-of-the-Three-Golden-Balls establishments. With a little patience you probably can dig up something of almost inestimable value and acquire it at a panic price.

That's about the only thing really interesting left in the Bowery, however. Its hey-day passed with the high-wheeled bicycle.

Today it's full of bums and honest-to-God down-and-outers, breadlines and scraggly cats, tenements and pushcarts. If you want to see How the Other Half Lives, walk down one of the alleyways leading from Roosevelt St. to the rear of the apartment buildings, and get a load of the rookeries there. On nearby Orchard St. the pushcarts cluster in profusion and confusion.

While you're in the Bowery neighborhood poke your nose into the Oliffe drug store, which has been doing business at that stand without moving a muscle since 1805. Among things sold there are leeches, used chiefly nowadays to speed the disappearance of blackeyes. It is frequented by many a prominent pugilist.

At night jobless men litter the streets, their belongings bundled into newspaper wrappings; other newspapers serving as pillows and sheets. In the daytime they shamble around, sometimes play cards on packing boxes, mooch small change.

Most depressing of all lower New York is The Tombs, primeval prison. Sombre and dingy as a Boston warehouse, forbidding as a medieval fortress, it is the grandfather of all the shudders. From the criminal courts building to this bleak gaol is a high span called "the Bridge of Sighs" over which condemned prisoners are led. It'll give you the creeps.

Standing disconsolately and hopelessly on the prison steps are knots of women waiting for the doors to open so that they may go in and see incarcerated relatives.

You'll want something to take the taste out of your mouth and the ugliness out of your eyes after you make your hasty exit from the district.

Mott and Pell streets are just about the slummiest of the slums. Together with Doyer and Bayard streets, they comprise most of Chinatown. Today this district suffers from the same malady as that afflicting the Bowery: arteriosclerosis. It gives itself a shot in the arm whenever a busload of sightseers arrives, and then subsides into its stupor. Taps—lights out—before midnight.

An occasional tong battle, lackadaisical to be sure (wasn't it Ring Lardner who ventured down there one day during a tong "war" to watch the shooting and found a sign on the bulletin board at the corner of Mott and Doyer streets reading: "Rain. No War Today."?) breaks the dusty monotony.

You'll find there old opium dens, sites of murderous attacks, twisting streets, strange foods, Joss Houses (Chinese churches) of much splendor, trinket shops, and an unexpected cleanliness.

Adjacent to Chinatown and the Ghetto is a colorful and noisy region inhabited by the subjects and might-have-been subjects of Mussolini. A still larger Little Italy is located in Harlem, others in the Bronx and Brooklyn.

Coffee shops there are little corners of home to the Italians. They chatter there in their native tongue, play table games, loaf in sprawling comfort. Take a peek into a few, and before leaving visit St. Patrick's Cathedral on Mulberry St. In spite of its Erinish name, it administers to the spiritual and sometimes physical wants of several thousand Italians.

You'll remember the smells of Little Italy, if not much else.

Anne Nichols is said to have netted some five millions of dollars from her play, "Abie's Irish Rose." Shure it is that the Kellys and the Cohens live side by each down on the lower East Side, and easy it might be for Isadore Goldberg to fall in love with Rosie O'Grady.

Jammed-up slums they are, with washing strung between windows over alleyways, youngsters swarming over steps and paves, Yiddish signs, elbowing pushcarts, sweatshops, fine brassware, bitter poverty, and gossiping on corners and stoops. Al Smith, who might have been President of the United States, was born and reared in this district. So was Jimmy Durante.

Push up through Russians, Gypsies, Czechs, Chinamen, and Slavs to Fourteenth St., where the atmosphere will brighten considerably. On this cheaply gay street photographers' shops alternate with dime movies, a couple of raw burlesque shows, automatic penny-catcher arcades, Klein's famous cut-price dress store, soap-box orators, and cheap-john stores run down to the river, where you'll find Cunard and White Star steamship piers, as well as the National Biscuit Co.'s pleasant-odored factory.

The Turks and Persians live on and around Washington St., running from the Battery to Fourteenth St.; a handful of Frenchmen in Chelsea; the beer-drinking and tuba-tooting Germans on East 86th St.; the tough Irish in Hell's Kitchen, which lies between 38th and 52nd streets, and begins at Eighth Ave. —wear your brass knuckles.

Higher caste Irish are making inroads upon snooty old Chelsea, which is also the site of London Terrace, world's largest cluster of apartments.

* * *

Harlem & the Village

Negroes, as everybody seems to know, live in Harlem. So do Italians, Scandinavians, Spaniards, and Irishers. Best place to see its variegated denizens is at the Market, where you buy from open-air stalls and carts.

It has a Spanish theater (San Jose theater), a tough burlesque house, and any number of open-all-night whoopee parlors. Of these we recommend the Owl Club at 113 West 136th St. which, after 2 or 3 o'clock, draws a wing-collar-and-swallowtail clientele to hear hilarious darkie songsters parody and lampoon current song successes until 'way past dawn.

There are rougher and more shocking spots to be found, if you really want. A taxi driver will take you.

It's always a Hot Time in the Old Town Tonight down in Harlem. Bring your own liquor—the "smoke" they sell down there would etch chromium. Moreover, take little stock in sweet potato pie and other highly advertised Harlem "delicacies." Just go for a look-see.

On 133rd St. are a number of well-liked spots such as Tillie's, where the only good food of the sector may be had, and the Nest. Where Lenox Ave. meets 142nd St. you'll find the liveliest night club in Manhattan, the Cotton Club. Its revues are fast, its music intoxicating, and its tap-dancing positively unequalled. Connie's Inn, almost equally famous, is a mild carbon copy.

From Harlem to Greenwich Village is a nice little taxi jaunt, but your correspondent always thinks of them in the same mental convolution. Both are places to go after the theater, or indeed, after other supper clubs. Both have those "intimate" dusk-to-dawn high-flying spots.

In the Village clubs the waiters sing. And in these days, your waiter may have been a tenor from the Metropolitan Opera. The baritone waiting on an adjoining table will be heard over the radio, probably, in a few months. And the piano players! Usually they work the twin-piano stunt, facing each other, and between them click the keys with the speed of a Horowitz. Oak-beamed ceilings, jacknife-carved panellings, initialled tables. A good one is the Tavern at 140 South Seventh Ave.

Greenwich Village was once an individual town. Later, as expanding New York encompassed it, the Village became the hang-out for artists and literati. New York swallowed it, but could not digest it.

Some artists live there today, but it has lost much of its old atmosphere. The old Brevoort hotel, for instance, is no longer the scene of intense arguments over style and pattern in literature, over concept and attack in painting.

At Lee Chumley's you may find a few of today's literary lights. But that's about all. Too many people found out about Greenwich Village. Rents went up. And the artists, of course, had to move out. Even the successful, well-paid ones left, because they were tired of having so many kibitzers looking over their shoulders.

* * *

'Where Bad Women Walk Good Dogs'

Fashionable New York is rather hard to find, chiefly because of encroachments. Racketeers, about the only wealthy people in New York these days, have muscled in on the socialites' territory.

Take Murray Hill, for instance. Home of satined, high-collared old ladies, of the elite Church of the Incarnation, of the correct Murray Hill hotel, of J. Pierpont Morgan and George Baker, of the Morgan library, this Morgan-owned end of Park Ave. is also infested with speakeasies.

Whereas nothing but the finest of everything may be tolerated in the homes of the remaining residents, the liquor served in the converted houses is of the most questionable antecedents.

Streets numbered between 50 and 60 are also dovetailings of old family homes and speakeasies. Rockefellers, Vanderbilts, and Biddles live in this district. The "Fashionable Fifties" harbor a number of fashionable shops, as well.

These fashion-shops continue into the Sixties and Seventies. In the eastern portion of this section is concentrated a thick population (several thousand) of the socially elect, such as the Drexels and Whitneys.

Go just a little further and you hit Millionaire's Town — Seventieth to Eightieth streets between Fifth and Third avenues. Just how many of the residents are still millionaires we can't vouchsafe; but at any rate, nearly all the residents have been members of that charmed circle in the recent past.

A lending library of photographs is located in the basement of the old Frick mansion at Fifth Ave. and 71st St. That, you must admit, is unique. Upstairs is a munificent collection of paintings.

As far back as 1862 the city of New York set aside some 768 acres of lake and greensward as a park wherein its citizens might find respite and recreation. Ever since that time various interests have been trying to encroach upon that sacred ground. They have all been routed.

Embellished with a double row of graceful elm trees, Central Park's Mall is an enormously wide promenade which will compare favorably with the most beautiful ambulating vistas of any nation's capital.

There's also Cleopatra's Needle, twin to the obelisk in the Place de la Concord of Paris, and brought over from Cairo, Egypt, by William Vanderbilt in the Nineteenth Century; an obelisk said to be nearly 3,500 years old. Also you'll find a gilt-edged equestrian statue of General Sherman, by Augustus St. Gaudens.

Bridle paths, motor drives, three dozen tennis courts, 16 baseball diamonds, bowling alleys, croquet greens, band concert stands, rowboats on the lake, skating in the wintertime, the zoo, the pony carts, the merry-go-round, a tiny pond for youngsters' model sailboats, the hansom cabs, the Metropolitan Museum of Art— all these old-fashioned delights have been enjoyed in Central Park by New Yorkers for generations.

If a stroll in the park puts you in a tranquil mood, you might walk up a few blocks to 58th St. and look over the art exhibits which hold forth in that vicinity. Peter Arno, interpreter of the age just past, shows here.

Near the East 72nd St. entrance is the Central Park Casino, one of the most expensive spots in New York for supper dancing. Dinner clothes or better are obligatory. And the atmosphere is about as smart as you'll find anywhere. Eddy Duchin's orchestra holds forth. This was one of the bands which played for President Franklin Roosevelt's Inaugural Ball.

A bigger zoo than that of Central Park is to be found in Bronx Park, which is a 700-acre natural park of more than ordinary attractiveness and restfulness. Here you'll notice, in addition to the zoo, a botanical garden, and athletic fields for everything from golf to cricket and polo.

Other worthwhile parks, if you care for that sort of thing (most visitors to New York find they have little time for parking) are Washington Square, Union Square (where the soapboxers chase the eagle and fly the flag), the private Gramercy Park, City Hall, Madison Square, Riverside, Morningside, Carl Schurz, Bryant, and Brooklyn's beautiful and well ornamented Prospect Park.

* * *

Newspapers

As the journalistic center of America, New York should be expected to produce the best newspapers in the country. It does. You'll find good sheets in Chicago, St. Louis, Kansas City, Indianapolis, and elsewhere, but in no city is the general standard of excellence so notable.

The New York Times is one of the most outstanding newspapers, from an editorial viewpoint, in the world. "All the News That's Fit to Print" is its slogan, and it proceeds to live up to it by printing the most detailed authentic reports of city, state, nation, and world affairs to be read in any newspaper anywhere. It is devoid of features, kolyums, pictures, cartoons, and comic strips.

Largest daily and Sunday circulation in the world is claimed for *The New York Daily News*, pioneer tabloid. The news told in pictures. Reasonably clean, generally truthful. Published by Patterson and McCormick of the *Chicago Tribune*.

The Evening Journal, one of William Randolph Heart's most successful enterprises, claims the largest circulation of any regular-sized newspaper in the country. Full of pictures and kolyums, strong on human interest, easy to understand, with considerable power and prestige among its readers.

The New York World-Telegram. When the old New York *World* was killed, the whole nation mourned. But here it is come to life again under the direction of Roy Howard. A campaigner and crusader. Well-written, informative, and fearless.

The New York Herald-Tribune is more liberal than the *Times*, more newsworthy than the *News*. Goes in for straight news reporting, strong editorials, mild features.

The New York American is the Hearst morning paper. Ultra-sensational, scores an occasional "scoop," carries a big want-ad section, packed with kolyums and by-line stories.

The New York Evening Post is published by the Curtis organization, the Curtis of the *Satevepost*. Old, conservative, small. Puts out its Sunday section on Saturday.

In olden days *The New York Sun* was known as "the newspaperman's newspaper," and the best journalistic diploma in the world was proof of having "worked with Dana on the *Sun*." That qualification may rank in American history with the "ancestors came over on the Mayflower" and "former Follies girl" badges. Today it is still a meritorious, heavy-with-news paper. Not many pictures, but plenty of good words.

Rigid Insulation

. . . FOR STRONGER FRAMES . . . LONGER LIFE

TODAY'S demand for better refrigerators puts it right up to you, Mr. Manufacturer! How to build them to give maximum efficiency? Here is one idea . . .

You can add strength to cabinet walls by reinforcing the frames with Armstrong's Temlok. This *rigid* insulation gives necessary "backbone" to the construction. It cannot settle or pack. Door slams and vibration cannot shake it down . . . create air vents and moisture pockets. And its high insulating efficiency will insure economical operation of your refrigerators. Cabinets built with Temlok are insulated for *life*.

Here, then, are important reasons why you'll want to consider Temlok for 1933 production! There are others. Your distributors will find a valuable selling argument in the fact that Temlok—which insulates your cabinets—is made by *Armstrong*. Fabricated sets of Temlok—furnished cut to size—speed up assembly and reduce labor time. They're light, too. Easily handled and quickly installed.

Let us send you samples and complete data about Armstrong's Temlok. Also, information about facilities available to you through Armstrong's Life Test Room. *Today* fill in and mail the coupon below.

Armstrong Cork & Insulation Company, 917 Concord Street, Lancaster, Pennsylvania.

Armstrong's A Product

ARMSTRONG CORK & INSULATION CO.
917 Concord St., Lancaster, Pa.

Please send me complete details regarding Armstrong's Temlok Refrigerator Insulation.

☐ Please send sample.

Name.....

Street.....

City.....State.....

BEER COOLING

GLASCOCK LINE WILL COOL BOTTLED BEER

(Concluded from Page 1, Column 1)

in. wide, and 32½ in. long. Inside dimensions of the refrigerated compartment are 27¾ in: long, 19¾ in. wide, and 13 in. deep. The cooler has 1¾ in. of insulation in the sides, and 2 in. in the bottom. Capacity of the "Public Service" model is 32 6-oz. bottles.

The Standard model in the new line has identical interior and exterior dimensions as the "Public Service" model, as well as the same insulation, but considerably greater bottle capacity due to the removal of the automatic dispensing apparatus. This model hold 88 6-oz. bottles, or 78 12-oz. bottles.

The Master model will cool 128 6-oz. bottles, or 110 12-oz. bottles. This cooler stands 34 in. high, 44½ in. long, and 25½ in. wide. Interior dimensions are 38¾ in. long, 19¾ in. wide, and 13 in. deep. In the sides are 2¼ in. of insulation, while the bottom has 2½ in. of insulation.

These coolers are available in ice-cooled models as well as with electric refrigeration.

PROSPECTS WANT BOTTLE SPACE IN REFRIGERATOR

DETROIT—Since federal legalization of 3.2 per cent beer, salesmen are finding that many electric refrigerator prospects are giving special consideration to the bottle-storage space of the models they inspect, according to R. I. Petrie, general sales manager of the Leonard Refrigerator Co.

Salesmen are finding, too, that prospects are favorably impressed by the fact that good units will maintain a constant temperature of approximately 45° F., which is a desirable temperature for bottled beer, he says.

Mr. Petrie, together with A. M. Taylor, merchandising director of the company, and J. J. O'Neill, new business manager of the Refrigeration Discount Corp., has been touring distributor points in the East, holding retail sales schools for dealers and salesmen as a part of the company's spring selling campaign.

The return of beer is, in itself, going to be responsible for many sales of electric refrigerators this spring, Mr. Petrie believes, and will create a considerable demand for larger-than-average models.

"The public has come to recognize that electric refrigeration is more efficient than ice for food preservation, and is cleaner and more convenient. The same story may be used now for the storing and cooling of beer.

"The salesman who emphasizes this story to his prospects this spring is the salesman who will enjoy a steadily increasing volume of sales. Assuredly, he will be talking a popular subject."

Frigidaire Cools First Beer in Cleveland

CLEVELAND—When the first legal draft beer arrived in Cleveland at 3 p. m. Friday, April 7, it went to thirsty palates via a Frigidaire beer cooler, according to H. H. Kennedy, district manager for Frigidaire.

The cooler was standing ready in the service bar of Weber's, one of Cleveland's most popular restaurants. Five minutes after the halves rolled down the chute, the froth that refreshes was gushing from the two draught arms.

At 5 p. m., according to Ivan Kaveney, owner of the restaurant, two bartenders opened the draft arms and they were not closed, except for the changing of barrels, until 1 a. m., April 8, when the last of 14 halves was dry.

More than 3,000 10-oz. glasses of brew were served and the temperature was held steady at 41°, Mr. Kaveney said.

The two other beer dispensaries in Cleveland installed similar beer coolers the next day. These are the Hotel Statler and the Hollenden hotel. While business has not been so brisk since the opening day, the run is steady, according to the operators.

Complete Beer Gardens Now Available

NEW YORK CITY—Adopting the Continental idea of beer outdoor gardens, Dubois Fence & Garden Co. here has designed a complete line of rustic wood chairs, tables, arbors, booths, etc.

"The Old Heidelberg," the "The Bier-Stube," and "The Hofbrau Garten" are among the types for which a prospective beer garden proprietor can select all the necessary furniture and appurtenances.

How to Crowd a Showroom

W. G. Main tells a prospect the story of refrigeration and beer in the showroom of the Danforth Refrigeration Co., Cleveland Westinghouse distributor, where a draft beer cooler has been set up.

FRIGIDAIRE PLANS SERIES OF BEER ADVERTISEMENTS

DAYTON—Frigidaire Corp. is promoting sale of its new beer-cooling equipment through newspaper and trade journal advertising copy.

Trade journal copy is being placed in a limited number of business publications read by restaurant, hotel, club, and beer men, according to H. W. Newell, vice president in charge of sales.

Copy for spot use by distributors, district branches, and dealers in large localities was sent out last week, according to Mr. Newell. Distributors, branch managers, and dealers have complete control over localized copy.

The advertising is of moderate size and simple design with the snapper statement: "Now — Frigidaire beer-cooling equipment."

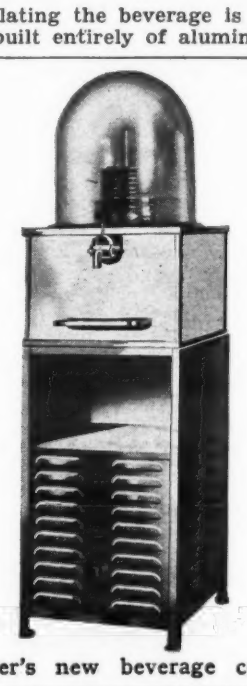
The copy launches immediately into a discussion of the scope of the beer-cooling equipment and the need for it in restaurants, hotels, stores, and other establishments in which beer may be sold.

Palmer Builds Cooler For Beverages

(Concluded from Page 1, Column 1)

18 by 20½ in., and stands 5 ft. high. In the lower portion of the cabinet is a ¼-hp. Universal Cooler condensing unit which feeds a Detroit Lubricator automatic expansion valve on the cooling coil. The cooling coil, of nickel silver, is visible in the beverage reservoir in the bottom of the inner glass drum.

Circulating the beverage is a small pump built entirely of aluminum and



Palmer's new beverage cooler.

stainless steel, according to B. W. Palmer, president of the company.

Panels in the upper portion of the cabinet are held in place without screws, Mr. Palmer points out, being removed by taking off the angled corner trim pieces. Upper and lower panels are finished in porcelain.

The upper part of the cooler can be made as a separate unit for installation as a counter model.

NEW BARS FINISHED IN STAINLESS STEEL BY LIQUID CARBONIC

CHICAGO—Liquid Carbonic Corp. has just released details of its new stainless steel line of beer-drawing equipment for restaurants, hotels, and other beer-serving establishments.

Smallest of the stainless models is Liquid's No. 262 which houses a Frigidaire TT-12CC beer-cooling tank. It is of metal construction throughout, Liquid Carbonic engineers state, and has two draft arms above a drip plate.

When this cooler is to be used in a bar fixture, it is furnished with an open back. Dimensions are 3 ft. 6 in. high, 1 ft. 6 in. long, and 1 ft. 11¾ in. deep.

To house two Frigidaire TT-12CC beer coolers, the company offers model 263 with four draft arms (for either beer or water) over a drip plate. This cooler has the same dimensions as model 262, except for its greater length of 2 ft. 8 in.

Models 264, 265, 266, and 267 are suited for operation either with water ice or direct expansion coils using electric refrigeration.

Model 264 is a beer cooler and dispenser equipped with either two or three coils for beer or water, insulated with cork, lined with copper, and built with metal construction throughout.

Complete Bars

A keg-cooling compartment is furnished in model 265, with coils for cooling the beer before it passes through the two draft arms. The coil compartment is lined with copper, while the ½-barrel compartment is lined with rust resisting steel. Drip pan and drainer are of stainless steel, as are the exterior panels. Height: 3 ft. 6 in. Depth: 2 ft. 4 in. Length: 4 ft. 4 in.

Model 266 is of the same general design as 265, except that it accommodates two half-barrels, one on each side of the center coil box. The bar stands 3 ft. 6 in. high, 6 ft. 8 in. long, and 2 ft. 4 in. deep, not including the drip plate which extends 4 in. back.

Similar to model 264, but containing four coils, is model 267. The coils may be used for either water or beer.

Two direct-draw beer service bars are offered in models 268 and 269, neither having a coil box. Beer is drawn direct from the kegs which are placed in refrigerated compartments adjoining the centered draft equipment. Compartment holds one half-barrel. The barrel compartments are cooled by means of Frigidaire fin-type coils operating on direct expansion.

Model 268 accommodates one half-barrel of beer, and stands 3 ft. 6 in. high, 2 ft. 4 in. deep, and 4 ft. 4 in. long. Holding two half-barrels, one on each side of the drip pan, is model 269. Dimensions are 3 ft. 6 in. high, 2 ft. 4 in. deep, and 6 ft. 8½ in. long.

Zahm Pressure System

Liquid Carbonic technicians feature the Zahm counter pressure system of beer tapping and cooling which is installed in place of beer coils. The Zahm tank (adaptable for either ice or electric refrigeration) has an automatic valve to keep its three-gallon capacity of beer under uniform pressure. For this device they claim uniformity of taste and an even "collar" of the beer drawn.

The company has also brought out two novelty boxes, one for two half-barrels and one for one half-barrel. These may be installed without an extra counter, the description states, being finished outside in wood. Both are furnished with a copper faucet drip pan.

The smaller model (for one half-barrel) stands 41 in. high, 24½ in. deep, and 34 in. long, while the double barrel box is 41 in. high, 24 in. deep, and 74 in. long.

BRAND NEW AND NOW READY

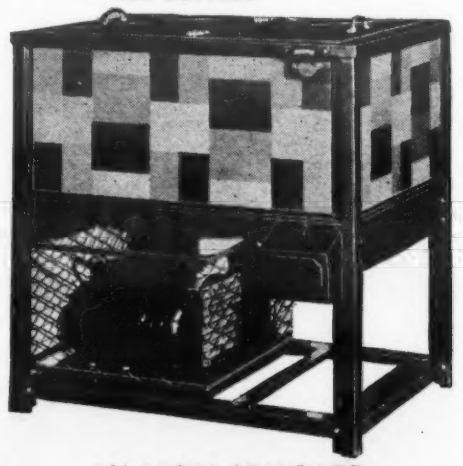
No left-overs, no compromise on use of obsolete materials — but a complete line of Modern Beer Coolers made for the purpose of attractively and properly dispensing Bottled Beer. Made by the world's largest exclusive manufacturer of Bottle Coolers and Dispensers. The Highest Quality and the Lowest Price . . . All-Steel Construction . . . Heavily Insulated . . . Beautifully Finished . . . In Four Colors.

"GLASCO" MASTER COOLER
ELECTRICALLY REFRIGERATED
128 BOTTLES

"GLASCO" MASTER COOLER
ICE REFRIGERATED
128 BOTTLES

"GLASCO" STANDARD
ICE REFRIGERATED
88 BOTTLES

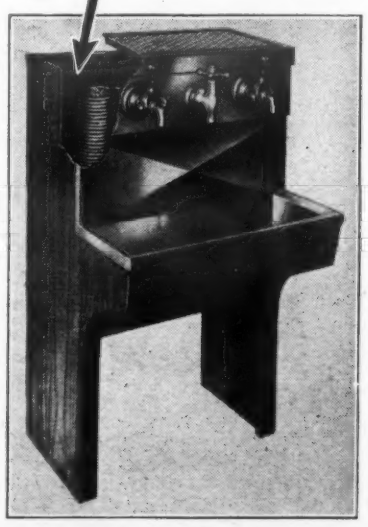
"GLASCO" BEERETTE
A ONE-CASE COOLER
FOR THE HOME



"GLASCO" STANDARD
ELECTRICALLY REFRIGERATED
88 BOTTLES

GLASCOCK BROTHERS MANUFACTURING COMPANY - MUNCIE, IND., U. S. A.

Approved
by authorities everywhere as the Best Coil for Beer Coolers



The RADIAL COIL
(PATENT APPLIED FOR)

● One of the few on the market that can be used exposed or immersed, the Radial Coil is specifically recommended for beverage, milk, and water coolers, soda fountains, etc. It is 100% copper, hot tin dipped after fabrication, giving highest conductivity. Made of copper tubing with copper radial disks, scientifically spaced, tinned, and fabricated by a new process, Radial Coils promote faster freezing, prevent choking of refrigerant, and provide a lifetime evaporator. If you make a refrigerating unit for beverage coolers of any kind, investigate the many advantages of the Radial (fin-type) Coil. Write for full data *today!*

RADIAL The New Refrigeration COIL

COMMERCIAL COIL & REFRIGERATION CO.
455 N. ARTESIAN AVE., CHICAGO

ENGINEERING

STEWART - WARNER STYLES DE LUXE LINE

(Concluded from Page 1, Column 1)

new "barrel type," semi-concealed hinges, finished in chromium. All De Luxe models are offered in either lacquer or porcelain exterior finishes.

An automatic interior dome-type light in the left-hand corner of the cabinet illuminates the food compartment when the door is opened. The designers have adopted a standard socket for this light to facilitate replacement when the bulb burns out.

Shelves are the adjustable, pull-out type, finished with a special "Sealco" process to prevent rust. The evaporator is shielded with porcelain partitions, and has a self-closing door.

The temperature control has a 12-point switch with defrosting position to permit defrosting while the machine is operating, and with no loss of refrigeration, Stewart-Warner engineers declare.

Standard equipment of the three De Luxe models includes one rubber ice cube tray besides the aluminum trays, a dessert tray of double depth, and a glass chilling tray for meats and fish —which also serves to catch moisture during defrosting.

Production is already under way, and shipments of the new models will start shortly.

Complete specifications on the new Stewart-Warner line follow:

Stewart-Warner Corp.
1826 Diversey Parkway, Chicago, Ill.

Model No.	45	55	65	77
CABINET SPECIFICATIONS				
Overall dimensions (in.)				
Height	55¾	60¼	61¼	64½
Width	23¼	25¾	30	31½
Depth	24	25½	26⅜	26⅛
Inside dimensions of liner (in.)				
Height	26	29½	30	33¼
Width	19	20½	23¾	25¼
Depth	16⅞	16¼	17½	17¼
No. of doors	1	1	1	1
STORAGE CAPACITY				
Gross food storage (cu. ft.)	4.81	5.7	7.19	8.35
Net food storage (cu. ft.)	4.32	5.22	6.45	7.56
No. of shelves	3	4	5	5
Total shelf area	8.45	10.84	16.75	17.97
ICE CUBE TRAYS				
No. of trays	2	2	3	4
No. of cubes produced	42	63	84	105
Weight of cubes (lbs.)	4	4.65	6.05	7.45
THICKNESS OF INSULATION				
Top (in.)	2	2½	3	3
Sides (in.)	2	2½	3	3
Bottom (in.)	2½	3	3½	3½
COMPRESSOR SPECIFICATIONS				
Compressor capacity (lbs.) l.m.e.	105	105	105	105
Motor size (hp.)	1/6	1/6	1/6	1/6
Compressor speed r.p.m.	860	860	860	860
Compressor bore (in.)	1¼	1¼	1¼	1¼
Compressor stroke (in.)	⅝	⅝	⅝	⅝
No. of cylinders	2	2	2	2
WEIGHT net (lbs.)	236	272	308	338

CABINET MATERIALS
Make of cabinet ..... Rex
Material used for frame ..... Steel
Material used for breaker strip .... Phenol condensate
Material used for gasket ..... Rubber
Make of gasket ..... Miller
Make of insulation ..... Thermocel

FINISH
Cabinet finish (exterior) ..... Model 45—lacquer; others—porcelain or lacquer
Cabinet finish (interior) ..... Porcelain

HARDWARE
Make of hardware ..... Hinges—Stewart-Warner; latches—Winters & Crampton
Process of manufacture ..... Die cast
Basic metal of hardware ..... Brass
Finish of hardware ..... Chromium

MOTOR
Make of motor ..... General Electric
Type of motor ..... Capacitor

COMPRESSOR
Make of compressor ..... Stewart-Warner
Type of system ..... Conventional
Type of compressor ..... Reciprocating
Compressor drive ..... Belt
Type of shaft seal ..... Fulton bellows
Location of compressor ..... Below

REFRIGERANT
Refrigerant used ..... Sulphur dioxide
Quantity in system ..... 1½ lbs.

LUBRICATION
Brand of compressor lubricant .... Vacuum
Quantity in system ..... 7½ oz.
How often should motor be oiled . Annually

CONTROL
Make of control ..... Ranco
Type of control ..... Temperature
Temperature regulation method .... Manual
How defrosted .. Defrost position on control

EVAPORATOR
Make of evaporator .... McCord & Fedders
Evaporator construction ..... Tubular
Metal used ..... Copper
Make expansion valve ... Detroit Lubricator
Type ice cube trays .. Aluminum & rubber

CONDENSER
Make of condenser ..... McCord & Fedders
Method of cooling ..... Fan
Type of condenser ..... Finned tube

SPECIAL FEATURES
Adjustable shelves; two sliding shelves with rear and front guard; forced-feed chilled oil lubrication system; interior electric light with standard socket.

TOUBORG JOINS GIBSON ENGINEERING DEPT.

GREENVILLE, Mich.—Jens Touborg, formerly with the refrigeration engineering department of Westinghouse Electric & Mfg. Co., has joined the engineering department of Gibson Electric Refrigerator Corp. Mr. Touborg will specialize in domestic refrigerator designing.

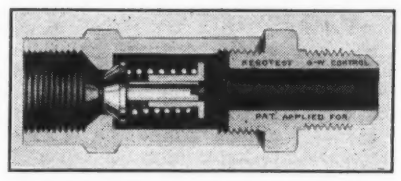
Kerotest Designs Back Pressure Control

PITTSBURGH—To improve operation of multiple systems particularly, and to eliminate condensation on suction lines, engineers of the Kerotest Mfg. Co. have designed a new back pressure control valve, known as the GW control.

According to W. H. Lamar, Kerotest engineer, the GW control is placed in the suction line of each evaporator in a system, just before the suction lines merge and return to the compressor.

The valve will prevent the higher back pressures from building up in the lower pressure coils, thereby eliminating interference with the operation of thermostatic expansion valves due to boiling of liquid in the suction line condensed by a colder coil.

It also prevents freezing back of the suction line on float or expansion valve



Kerotest's new GW control developed for multiple systems.

coils, a trouble which was manifested by broken flare nuts, pinched-closed tubing, and dripping suction lines.

Apartment house multiple systems using the new control can be operated as efficiently as single coil systems, Mr. Lamar declares, each coil having complete control of the compressor switch, instead of the warm coil giving off gas vapor to a cold coil in the system, and flooding the suction lines with wet gas when the compressor starts. Freezing and thawing of suction lines is supposed to be entirely eliminated with the control.

A protection claimed for the compressor with the new device is prevention of wet gas from entering the crankcase and causing the oil to foam.

Mr. Lamar also claims that the new control will reduce running time of the machine on either single or multiple systems, because each coil has direct control over the pressurestat or thermostat.

PATENTS

ISSUED APRIL 4, 1933

1,903,301. AIR COOLER AND HUMIDIFIER. Frederic E. Snowden and John P. Roach, Los Angeles, Calif. Filed June 20, 1927. Serial No. 200,055. 9 Claims. (Cl. 261—29.)

1. In an air cooler and humidifier, a structure having a plurality of superimposed trays, adjacent trays being inclined in opposite directions, means to force air under pressure simultaneously over the trays from one end in the same direction, the trays at the intake end discharging substantially an upper one into the tray next below and at the discharge end an upper tray discharging into a lower tray by pipes, said trays being spaced apart at the discharge end.

1,903,339. AIR CONDITIONER. Thomas J. Kehoe, Perrysburg, Ohio. Filed Feb. 10, 1932. Serial No. 591,956. 2 Claims. (Cl. 261—29.)

2. An air conditioner comprising a receptacle adapted to contain liquid in the lower portion thereof and having opposed openings providing a substantially horizontal air passage through the receptacle, motor supported by said receptacle and having a shaft extending inside of said receptacle, a fan rotatable through one opening and expelling sand through the opposite opening, a pair of laterally spaced spray-forming plates rotatable with said shaft, a substantially cylindrical spacer between said plates, and an endless belt supported by said spacer and provided with a substantially flat spacer-engaging surface, the lower part of said belt extending into the liquid, the width of the belt being such that a slight space is provided between the sides of the belt and the adjacent plate so that liquid adhering to the underside of the belt is rolled laterally to the plates.

1,903,351. EVAPORATOR. Carl E. L. Lipman, Chicago, Ill., assignor to Lipman Patents Corp., Chicago, Ill., a Corporation of Delaware. Filed Feb. 27, 1931. Serial No. 518,745. 7 Claims. (Cl. 62—126.)

1. In an evaporator, a pair of unitary sections, each section comprising a header and a plurality of spaced refrigerant tubes extending therefrom and terminating at both ends in said header, the tubes of one section being inter-leaved with the tubes of the other section to form an enclosure constituting a refrigerating chamber and in such a manner that the tubes of each section bound at least two sides of said chamber.

Ilg's Self-Contained Room Cooler

Ilg Electric Ventilating Co. has just announced a new self-contained room cooler (shown against wall) with an Ilg refrigerating system inside the cabinet. Cooling capacity is .55 tons of refrigeration.

Universal Cooler Builds 3-Cylinder, 10-Ton, Self-Contained Machine

(Concluded from Page 1, Column 2)

are 4 by 4¼ in., and its standard speed is 400 r.p.m. Capacity tests show that the machine produces 10.56 tons of refrigeration using F-12 on air-conditioning pressures, or 4.72 tons under A.S.R.E. standard conditions. The unit is also suited to operation with methyl chloride, or with a 7½-hp. motor.

Overall dimensions of the new machine are 56 in. long, 26 in. wide, and 29 in. high. It weighs 1,400 lbs. complete. Wagner motors are used, driving the compressor by means of eight Dayton multiple cog belts. Compressor seal is the conventional bellows type with an internal spring. The machine is shipped with a 16-lb. charge of F-12.

A Penn dual pressure control with high-pressure relief is used on the new machine, and a special Penn water valve with a ¾-in. pipe connection. The control and motor are all wired up before shipment. A Cutler-Hammer 10-hp. starter is provided as standard equipment.

The condenser is of the four-pass, double-tube type, employing the counter-flow principle. It is manifolded at the top and bottom. Cooling water flows up from the bottom, against the direction of refrigerant, and is piped from the top of the condenser over to the compressor where it cools the discharge valve plate before being discharged to the sewer.

Suction and discharge valves were designed to provide the ample area needed to maintain a low gas velocity, Mr. Higham points out. Multiple disc valves are used in the piston, and a multiple cup type for the discharge valve. The compressor is oiled by the splash system.

Each of the three throws on the crankshaft is spaced 120° from the other two, while a balanced flywheel contributes to the balance of the machine.

Supported in two main bearings 3 in. long, the crankshaft is a heavy drop forging. Connecting rods are "I" section forgings, while the piston and block are of semi-steel close-grain metal. The piston is provided with three ⅛-in. rings. Frame of the condensing unit is constructed of channel iron, while the motor and compressor supports are of angle iron.

NEW ICEFIN FORCED DRAFT COOLING UNIT ANNOUNCED

TRENTON, N. J.—Fitz Gibbon & Crisp, Inc., here, manufacturer of refrigerated truck bodies, is manufacturing a new Icefin forced draft cooling unit for use with solid carbon dioxide or water ice in refrigerated trucks.

Air is drawn across the cooling medium by means of a three-ampere electric fan which is operated from the truck's storage battery.

The unit is also equipped with ventilators for natural air circulation when operation of the fan is not necessary. A drain is provided for carrying off water from natural ice or gas from solid CO_2.

When water ice is used, the ice is placed into the unit in cakes. The unit is approximately the size of an egg crate, the manufacturer states.

REPUBLIC MFG. CO. MAKES TRAP VALVE

DAYTON—To replace the receiver tank and high-side float valve mechanism used on household refrigerating systems operating above the food compartment, an automatic trap valve is being introduced by the refrigeration division of Republic Mfg. Co. The new float is 5½ in. high, with a maximum diameter of 2½ in., and is made of cast bronze, according to W. W. Boes, sales manager of the company.

NEW MACHINES USED IN COPELAND PLANT

MT. CLEMENS, Mich.—Several new production machines and specially designed machine tools have been installed in the factory of Copeland Products, Inc., to produce the new cartridge type refrigerating machine which the company introduced this year for its household models.

The production line is shorter, and by combining operations a small number of machines have been adapted to accomplish a greater number of operations, according to Edward Hughes, in charge of manufacturing.

"For example, a 3F Fostermatic machine combines eight tools and 11 operations at one point," he states. This machine drills, bores, reams, and faces a bushing hole, presses in the bushing, and bores, reams, and finishes the faces of the bushing.

It also rough-faces and finish-faces the cover face, bores the cover pilot hole, and bores, grooves, and champfers the stator hole, in addition to cutting oil grooves in the bushing, Mr. Hughes explains.

Another machine, the Heald Bormatic, is used to diamond bore six holes varying in diameter from ⅜ in. to 6 in., keeping tolerances within .0002 in., he claims. Multiple drill heads and multiple tapping heads are used for all mounting holes.

RICE REPLACEMENT PARTS AVAILABLE IN BROOKLYN

BROOKLYN—Replacement parts for Rice electric refrigerators, formerly manufactured by Rice Electric Refrigeration, Inc., of this city can now be secured from Rex Cooling Industries, 35 York St. here, according to Alfred Munoz, president of the latter firm.

HYDROGEN *Electric* WELDING *improved the Product . . and* REDUCED *the Cost!*

These two pulleys were both manufactured to do the same job. One was machined from a casting, entailing a waste of material, the expense of a special machine set-up, and, of course, the labor, required in the machining process. The other pulley was made from two simple inexpensive stampings and a screw machine bushing—all welded into a solid piece by a single trip through the Bundy Hydrogen-Electric-Welding furnace! The welded pully is not only lighter and stronger but its cost is far less than that of the casting! The joints have been proven not only in actual use but by exhaustive laboratory tests to be far stronger than the steel they weld together.

This example will no doubt bring to mind instances in your own production where the use of Hydrogen-Welding might make for better appearance, greater strength, lighter weight, the elimination of expensive castings or forgings, or an important saving in labor cost. As a matter of fact, Hydrogen-Welding is adaptable to practically any product which can be assembled from iron or steel.

The installation of Bundy's mammoth "Zeppelin" Hydrogen-Welding furnace brings to industry for the first time the far-reaching advantages of this modern process. Parts may be furnished machined for a snug fit, to be assembled ready for welding. Or Bundy will furnish complete parts to your specifications. The illustrated booklet shown below will tell you the whole story. Send for your copy.

BUNDY
TUBING COMPANY

BUNDY TUBING COMPANY
4827 Bellevue Ave., Detroit, Mich.
Please send me a copy of your illustrated Hydrogen-Welding booklet.
Name_____
Position_____
Firm_____
City_____

SERVICE

Proper Management Will Make Profits For Service Department

By Roger K. Braun, Kelvinator Corp.

ONE of the important parts, if not the most important, of a successful refrigeration business is that of service. Good service is one by which the customer can secure prompt, courteous, efficient, and economical service when desired and not at a loss to the department. A service department which does not fulfill these qualifications will hinder the success of a company. The service department should and can invariably be made into a very desirable asset, if properly organized and equipped.

There are many service departments on record returning a good profit on their investment, and they are those who keep their customers' good-will by giving good service. It is noticeable that service departments showing a loss each month are those which lack the essentials of good service or make no effort to retain good-will.

Whether the service department is large or small, it can be successful only if conducted on the basis of rendering a dollar's worth of value for every dollar paid. If the service to the customer is excellent and the department is well-managed, the return will be large; if the service is poor or the department mismanaged, the return will be poor.

Therefore, to make the service department successful and profitable it should be operated with due consideration to the following:

1. The affect of good and poor installation and service on customers.
2. Affect of word-of-mouth advertising by owners, on the general public, which includes prospective owners of refrigeration equipment.
3. The affect of departmental profit and loss on the distributor's total profit.

It is to be assumed that the original impression of the distributor's organization in the mind of the customer was good, or the sale would not have been made. Therefore, when new equipment has been delivered to the customer, the service department assumes the responsibility of maintaining the good impression held by the owner in the first place.

The new owner expects his equipment to give a good many years of satisfactory service and the service department plays a most important part in fulfilling the owner's expectation.

Service Manager's Responsibility

After installation the sales department has few contacts with the customer, the majority of the contacts being through the service department. The responsibility of keeping the owner satisfied and sold on the equipment rests upon the service manager.

It is in the power of any service employe, who comes in contact with the customer, to destroy or promote the good-will of the customer. Customer good-will is the greatest asset any organization can have. Service properly rendered helps increase business, builds up a reputation for the distributor, and in itself pays a profit.

The following discussion covers methods of service department operation that have been used by successful service managers, and have proved over a period of time to be efficient and operate at a departmental profit. The outline is somewhat elaborate for small service departments. However, in these set-ups, the number of functions may be doubled up and in some cases may even be omitted without sacrificing efficiency.

This discussion will be grouped into 11 classifications:

1. Personnel.
2. Operating costs.
3. Training of personnel.
4. Equipment and tools.
5. Appearance and maintenance.
6. Installation of equipment.
7. Servicing of equipment.
8. Shop operation.
9. Handling material.
10. Compensation.
11. Increasing service business.

With regard to service personnel, the number of employes forming the service personnel varies with the size of the distributorship, but it should be remembered that both the large and small service department perform the same services for the customer, the essential difference being that the larger one performs this operation more often than the smaller.

A larger service department should have the following personnel:

1. Service manager.
2. Assistant service manager or supervisor.
3. A service dispatcher.
4. Shop foreman.
5. Field service representative.
6. Installation and service men.
7. Parts man.
8. Stenographers and clerks.

Cooperate with Sales Department

The proper operation of the service department carries a constantly increasing responsibility. There is a direct sales relation between the operation of the service department and the distributor's sales program. It must be managed so that it develops and grows in proportion to the increase of sales.

The service manager has general supervision of installation, service, repairs, and parts. The importance of the service department in the responsibility of retaining and creating customer good-will, and contributing its share to the distributors total profit must be realized by every service manager in order to retain his job and justify his title.

He must *manage* service. His responsibilities and duties are many and varied. He is directly responsible for the service department personnel, the service department expenses, claims and complaints, service department records, proper equipment and tools, general appearance and up-keep, training of service personnel, parts and the contacting of dealers.

Service Manager's Qualifications

The service manager's qualifications are of great importance. They are organizing and administrative ability, knowledge of accounting and expense control, good judgment, leadership and initiative, dependability, and diplomacy and tact, pleasing personality and mechanical knowledge. From this it can readily be understood that the service manager who understands his job must be a combination of business man, executive, salesman, and mechanic.

In an organization of sufficient size, it will be found necessary to employ an assistant service manager or supervisor, or even more than one. Supervisory duties as well as all outside work should be assigned to each one by the service manager, leaving the service manager free to handle the more important duties of supervision.

Service Dispatchers

In an organization of sufficient size, it is necessary to have service dispatchers to receive all service calls from the customers, and relay them to the proper service men.

The shop foreman, of course, is in charge of the repair shop.

The field service representative should conduct service schools for the training of dealer's service men, and contact the dealers and assist them in installation, service, and management problems.

Installation and service men, of course, make the installations and do the service work. They are one of the most important members of the organization, because they hold the distributor's reputation in their hands.

The parts man also is one of the most important members of the organization, because he is in charge of the department providing the distributor with his second largest source of profit.

Maintenance of Parts Stock

The parts man has a two-fold responsibility. First, to his employer for returning a reasonable profit on his investment in parts; second, to both his employer and the refrigeration manufacturer for protecting the goodwill of users by having available whatever parts they need.

The parts man should realize that the parts in the stock bins are practically the same as money. Not only must the parts be guarded against loss, but they also must be protected with adequate records.

The operating costs of a service department are perhaps the least understood and, consequently, more responsible for a dissatisfied distributor than anything else. The service manager must be able to analyze the costs as they are accumulated on installation and service work and other functions of the department, and determine if they are as low as they should be.

If the cost of operation is not carefully controlled by the service manager, he is doing a poor job. Many service managers believe when they answer calls quickly, make good installations, and do not have complaints from customers that they have done a good and complete job. They forget that they are good managers only when operating costs are low and a profit shown.

The service manager should make monthly and yearly budgets divided into various accounts that are as low as he believes it is possible to operate. Each account should be kept within the budget limits, as this is the only way that an accurate control of expenses may be had.

The monthly budget should be broken down into daily amounts against which should be set up the daily expenses, thus controlling the expense. Expenses that are viewed only when monthly statements are rendered cannot be controlled, as the time for control is past.

Cost Control

Costs of commercial installations and service must be carefully watched, as a lot of money can be wasted on these if the sales department promises customers to repair refrigerators or fixtures, or do anything other than install the equipment.

A record of these extras should be kept and the management shown how these extras are affecting profits. These extras should be charged back to the sales department, as they are not service department expenses.

Service department operating cost is made up of two expenses—fixed and variable. Fixed expenses are those more or less out of the service manager's control, and include such items as supervision, salaries, and depreciation. However, this portion of expense materially affects the success of the operation, and it must be watched very closely in connection with the department's average volume of labor sales.

With the volume of labor sales diminishing and fixed expenses remaining stationary, it is readily understandable that the department will show a loss unless something definite and constructive is done to either reduce the expenses or increase the volume.

Variable expenses are under the service manager's control, and include such items as service, shops, and installation labor, maintenance, heat, light, water, claims for property damage, repeat service calls, idle time, etc.

Payment of Service Men

If the installation and service men are paid on an hourly basis, for every hour of labor the distributor pays, the service manager should see that the distributor receives an hour's productive work. The hours of labor sold to customers and other departments and hours of wages paid to the installation and service men should equal.

If the former is less than the latter, the results are idle or lost time and departmental loss. Idle or lost time and not-at-home calls are two of the frequent causes of service departments showing unprofitable operation. Therefore, the service manager should closely follow these items and see that they are kept at a minimum.

As to the training of personnel, because of continual improvement of refrigeration equipment, installation, service and repair methods, tools and service department operations in general, it is essential that the entire service personnel be given continual instructions along these lines so that efficient and profitable operation may be maintained.

Most refrigeration companies maintain service schools at the factory for the purpose of training men on the installation and service of their equipment, and also a good many of the companies conduct schools in the field as well.

In addition to the training facilities supplied by the refrigeration companies, it is a good plan for the service manager to conduct service meetings twice a month at which all installation and service men should be required to attend. A definite program should be laid out and carried on in a systematic manner. The meeting should not last over two hours and should be arranged so that they are part inspirational and part educational. A portion of the time should be thrown open for the installation and service problems that the men encounter in the field.

Keep Equipment in Order

It is vitally important that proper and efficient equipment, both shop equipment and installation and service tools, be purchased and used in order that maximum efficiency be obtained. Good service cannot be given owners without them. The lack of proper tools or poor tools seriously affects the quality of the work, causing repeat calls and customer dissatisfaction.

At least one installation truck fitted out with a number of bins or compartments for various installation material and refrigeration parts should be provided.

Service Trucks

Each service man should have a light car or truck. Two different methods of furnishing service cars are used. One method is to have cars owned by the distributor and supplied to the men. Advantages of this are the fact that the cars bear the company's name are of the same type and appearance, and are under company

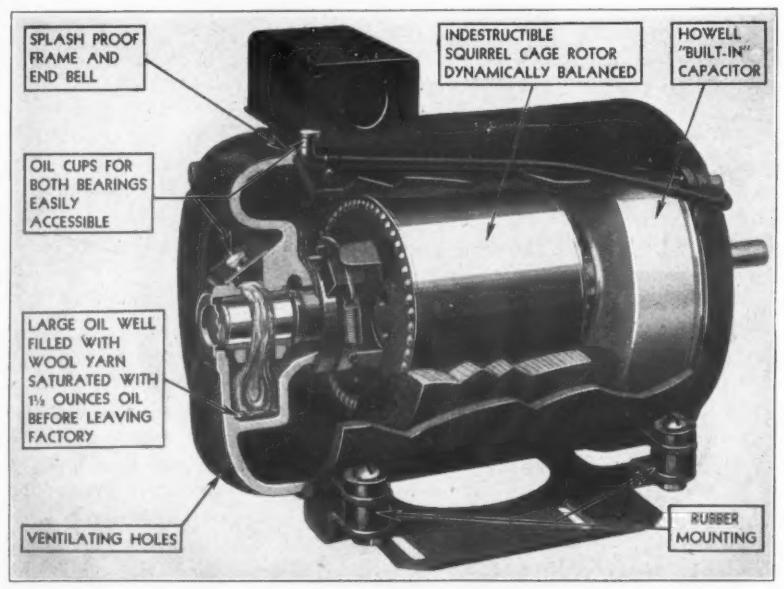
(*Concluded on Page 17, Column 1*)

ANSUL
a dependable
SULPHUR DIOXIDE

Dependability is a quality that is paramount in Ansul Sulphur Dioxide. There is a guaranteed analysis on every cylinder that leaves our plant for refrigeration work.

ANSUL CHEMICAL CO.
MARINETTE -- WISCONSIN

How to save money on Motor, Transmission, Crank, Eccentric and Compressor Shafts: Send us your blue prints, we will send you our prices. Write today.
-- at Lower COSTS! precision built SHAFTS
MODERN MACHINE WORKS
156 N. Milw. St. Milwaukee, Wis.


SPLASH PROOF FRAME AND END BELL
INDESTRUCTIBLE SQUIRREL CAGE ROTOR DYNAMICALLY BALANCED
HOWELL "BUILT-IN" CAPACITOR
OIL CUPS FOR BOTH BEARINGS EASILY ACCESSIBLE
LARGE OIL WELL FILLED WITH WOOL YARN SATURATED WITH 1½ OUNCES OIL BEFORE LEAVING FACTORY
VENTILATING HOLES
RUBBER MOUNTING

Howell Built-In Capacitor Solves the Space Factor

Howell, a pioneer in the development and building of capacitor motors, now offers a fractional horse power motor with a built-in capacitor, which brings the appearance of the motor to a conventional form, yet gives all of the advantages of the capacitor motor. This overcomes the greatest objection to this type of a motor, as it solves the space and appearance factors.

The new Howell Capacitor motor does not have any outside capacitor.

The capacitor is built inside the motor frame; it is compact, neat in appearance, light in weight, yet it has an abundance of power for its rating; with high starting torque, high efficiency, high power factor and liberal overload capacity.

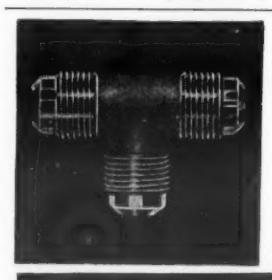
Howell Sales and Service in over 50 Principal Cities

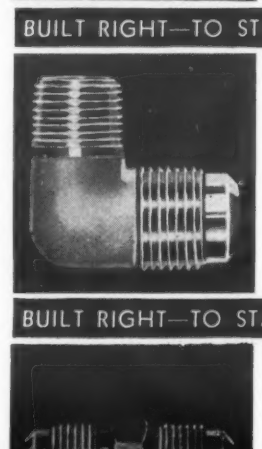
Howell Electric Motors Co.
Howell Michigan
Pioneer Builders of Capacitor Start Motors

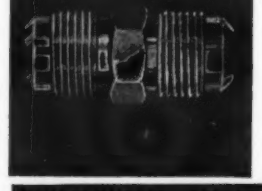
Testing Service
for Domestic and Commercial Electric Refrigeration

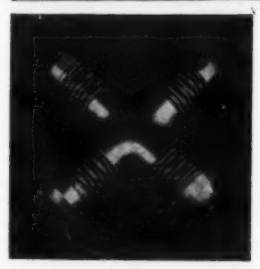
[Testing and experimental laboratory service for Manufacturer, Distributor, Central Station. Test data exclusive property of client.]

Electrical Testing Laboratories
80th St. & East End Ave.
New York









SKILL

To the task of making automatic refrigeration devices is brought the combined experience, research, craftmanship and industrial equipment of masters of the industry.

Year by year the deposit of skill grows with volume of the business and present-day refrigeration methods are as far ahead of pioneer days as the 16 cylinder automobile transcends the old "one-lunger."

In fittings, the product of Commonwealth Brass Corporation, the advance in the arts includes better design, metallurgy, machining, packing and inspection. Fittings of 20 years ago cannot be compared with those of today.

Step by step with development, Commonwealth Fittings have been improved until they now represent the ultimate in seepage-proof fittings.

Manufacturers, installers, and users alike may always rely on Commonwealth Fittings because they are "Built Right To Stay Tight."

Send for catalog No. 36 for full details.

COMMONWEALTH BRASS CORPORATION
5781 Commonwealth Avenue
D E T R O I T

GOOD MANAGEMENT NECESSARY TO MAKE PROFITS IN SERVICE

(Concluded from Page 16, Column 5)

control. The disadvantages are that investment and up-keep are high, and garage space must be provided. Here, again, the car should be fitted out with bins or compartments as in the installation truck.

The other method is to have the cars owned by the service men and allow them a certain amount for their use.

Every service manager should make a close inventory of the appearance of his department. Clean and neatly dressed installation and service men, well kept up trucks and cars, and a clean repair shop invite the respect of the owner, promote efficiency and morale, and help increase the service department profits.

As to the installation of equipment, the routine followed by various concerns, of course varies. However, there are certain points that I wish to bring out.

Each commercial or multiple apartment installation should be checked on the ground by the assistant service manager or supervisor to see that the equipment sold for the installation is correct. If any changes in equipment are necessary, recommendations should be made accordingly and turned over to the installation supervisor.

Checks All Large Installations

All installations should be scheduled by the installation supervisor or whoever is in charge of installation. During installation the service manager or installation supervisor should check each commercial or multiple installation in process, and 48 hours after completion another check should be made.

Likewise, the method of servicing equipment varies with different companies, but again certain points may be brought out. Incoming service calls from customers should be arranged so that all service calls will be received by the service dispatcher.

Men Work by Territories

Each service man should be assigned to a definite territory, and should handle all service calls in his territory except in case of emergency when it might be necessary to send another man into the territory. In the morning each service man takes his service calls, and also calls in at least three times a day for additional calls in his territory.

It is our recommendation that all service calls and equipment not under the guarantee, except repeat, inspection, or no-charge calls, be handled on a c.o.d. basis.

Suggests c.o.d. Collections

This method of collection for service work and parts is very efficient. Better than 50 per cent and as high as 90 per cent of customer charges are being collected at completion of the service work. This effects a large saving of operation of a service department by eliminating a large part of the bookkeeping and collection expense entailed where service is done on a charge basis.

The service shop arrangement depends, to some extent, upon the building that houses it. In a large service department, space should be provided for a general repair shop and a cabinet refinishing room.

The handling of material may be broken down into handling of parts, ordering materials, receiving material, issuing material, shipping and delivering material, and service car stock.

As to the handling of parts stock, needless to say, accurate records must be kept and the parts handled in a business-like way. Parts stock should be balanced. By balanced is meant stock that equals demand.

There are two things that the parts man must guard against. First, he must be careful not to run short of a part when it is fast moving; second, he must be careful not to be heavily stocked on a part when it becomes slow moving. Close study by the parts man of the parts stock record or of parts usage will govern the parts inventory.

Ordering Parts and Materials

In the ordering of material, orders for parts should be placed on the same day every month, because this is the easiest and most intelligent way to order. By so doing the demand may be determined, and hence orders placed intelligently.

Self-contained refrigerators may be delivered by the distributor or by a cartage company. Delivery by a cartage company is recommended as being the cheaper, as the truck man can easily be told how to open the service valves, remove the hold-down bolts, etc., so that it is unnecessary to send a trained installation man. We have found this practice to be very successful in our branches.

Each service man should carry in his car a sufficient supply of small parts and material to enable him to handle any service call properly.

The subject of compensation should be divided into compensation for installation men, and compensation for service men.

Installation men should have their own cars when the distributor doesn't have an installation truck for each crew, and be paid a fair price according to local conditions for the use of it.

Installation men may be paid on an hourly or monthly basis, or on a basis of a fixed amount for an installation.

There are two general methods of paying service men, the hourly basis and the flat rate basis. In the hourly method, the service man is paid by the hour for service work. In addition service men who use their own cars should be paid a fair price, according to local conditions, for the use of them.

Flat-Rate Payment

Under the flat rate method, the service man is paid a flat rate for servicing equipment. This flat rate covering both his wage and car allowance if he uses his own car, or just his wage if the service car is company owned.

As an incentive to collect c.o.d. charges on service, they may be given a percentage of the money collected. Where this is in effect, very satisfactory results are obtained. A base rate of 5 per cent is commonly used. Service men may also be given a bonus for collecting old service accounts.

A company selling refrigeration is somewhat more limited than some other businesses to increase its service business. It is possible, however, giving an inspection of such equipment business by a program of planned service covering repair and accessory sales.

The proper use of such a program will not only go a long way in offsetting the overhead of the service department, but will increase profits.

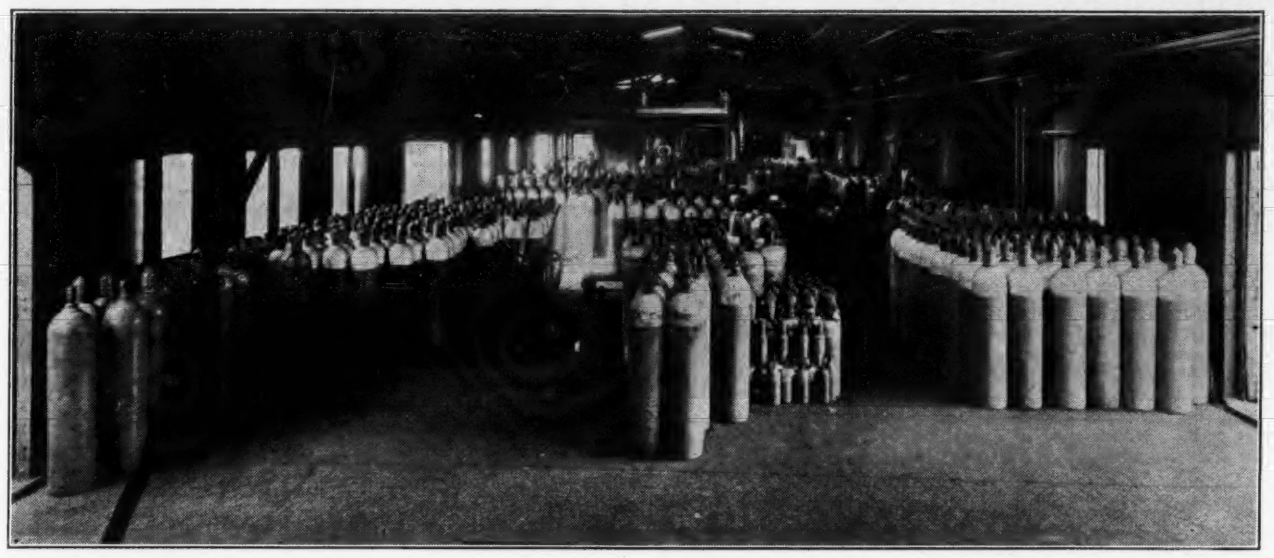
For instance, we have been using a plan known as the User Good-Will Campaign. This campaign is based upon the idea of rendering a definite service to owners of older models by giving an inspection of such equipment free of charge, recommending the necessary repairs and selling accessories.

This plan operates to build good-will for us and the distributor. In any community it helps the service department to show a more profitable operation, and at the same time allows the service men to increase their earnings.

In conclusion, the managing of the service department is exactly the same as any other business in that the following sound essentials must be present if it is to be successful:

1. A good product.
2. A market for the product.
3. Good merchandising.
4. Proper and sufficient advertising.
5. Sound management.

Sulphur Dioxide Ready For Call



Virginia Smelting Co.'s shipping platform at the factory in Norfolk, West Virginia, showing 5-, 10-, 35-, and 150-lb. cylinders of sulphur dioxide ready to go out. This company stocks refrigerant at 28 points.

AMTHOR BRINGS OUT NEW TACHOMETERS

BROOKLYN—Amthor Testing Instrument Co., Inc. of this city is introducing a new direct reading hand tachometer which makes speed measurements in either revolutions per minute or feet per minute, and features a device which causes the indicator to remain fixed at the last reading when the instrument is removed from the rotating shaft.

After being attached to the shaft, the new instrument follows each pick-up and slow-down. After being used, the indicator may be returned to the "zero" position by means of a push button.

This is not necessary, however, says the manufacturer, as the indicator will immediately point to the correct speed when next attached to a moving shaft.

The entire speed range of the tachometer is subdivided into four separate ranges, each of which reads over the entire dial, to provide for close readings.

Two models of the instrument are being manufactured—one with a range of 30 to 4,000 r.p.m., the other with a range of 90 to 12,000 r.p.m. List price of the device is $50.

FLEXIBLE TUBE ANNOUNCED FOR INSTALLATION WORK

CHICAGO—The Chicago Tubing & Braiding Co. is introducing two new types of flexible galvanized tubing for use by commercial and household refrigeration installation men for enclosing refrigerant tubing.

One type of the new tubing is of the interlocked variety. Features of this tubing are the fact that it cannot be untwisted and that it is sufficiently rigid for overhead installations, according to the manufacturer.

The other new tubing is of the square-locked type. Its construction is such that cut sections of the tubing may be screwed together, and its manufacturer claims that it has a very low bending diameter.

NEWS!

REFRIGERATION TUBES

in lengths up to 200 ft.

For the first time in the industry's history, Seamless Copper Refrigeration Tubes as large as one-half inch in diameter are available in lengths up to two hundred feet. Smaller tubes can be had in even longer lengths. For instance, the one-quarter inch tube illustrated is 425′ long.

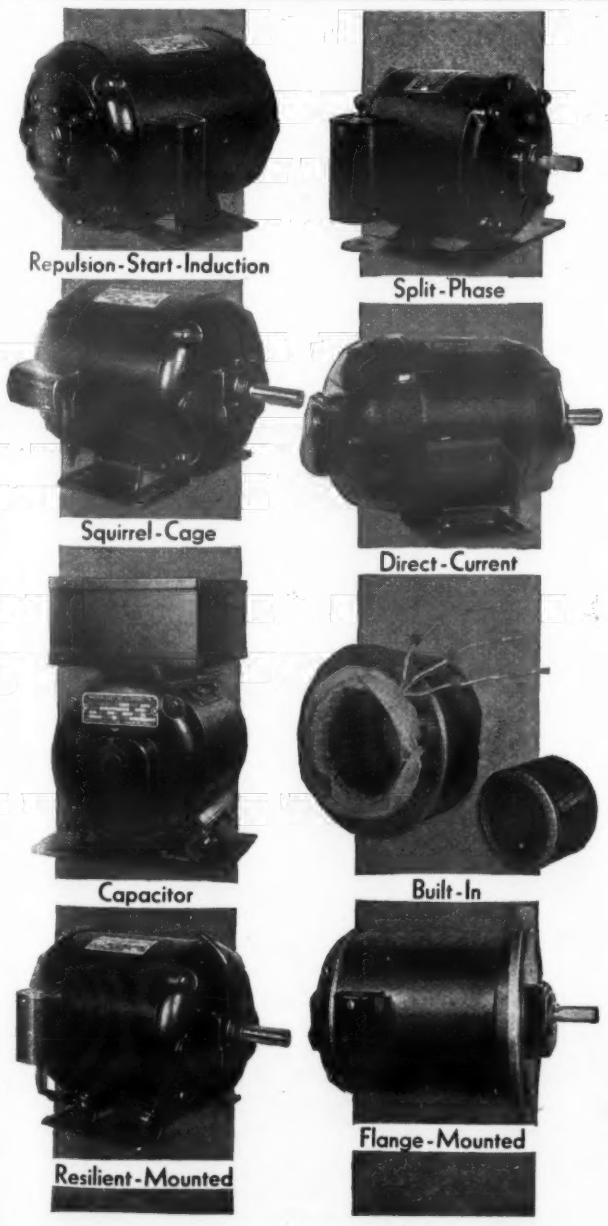
A newly developed process has made possible these long lengths, which materially reduce the risk of failure by minimizing splices. The longer lengths also reduce scrap losses, as the exact amount required can be cut without waste at the ends.

French De Luxe Copper Refrigeration Tubes are free from oxide and foreign matter. Each coil is *completely* dehydrated, sealed, rigidly tested and reaches you ready for use. For manufacturers who prefer to do their own dehydrating, the French Manufacturing Company produces copper tubes dried (*commercially* dehydrated), with either open or closed ends.

All French Copper Refrigeration Tubes possess the requisite properties for lasting, dependable service. Their grain structure is uniform. This important quality is in every coil because highest metallurgical skill, long manufacturing experience and only the best of raw material go into their production. Additional information will be furnished upon request.

THE FRENCH MANUFACTURING CO.
General Offices: Waterbury, Connecticut

FRENCH REFRIGERATION TUBES



You can

Standardize on Wagner Motors

The Wagner line includes all types of small motors generally applied on refrigerators, making it possible for you to standardize on Wagner motors. Whether alternating or direct current; single or polyphase; open, drip-proof or totally enclosed; rigid or resilient-mounted, flange-mounted or built-in—there's a Wagner motor now in existence, ready to be applied on the job.

There are some 25,000 different type-horsepower-speed combinations of Wagner motors (in ratings of 1/30 to 400 hp). Certainly, your motor requirements can be met by the Wagner line!

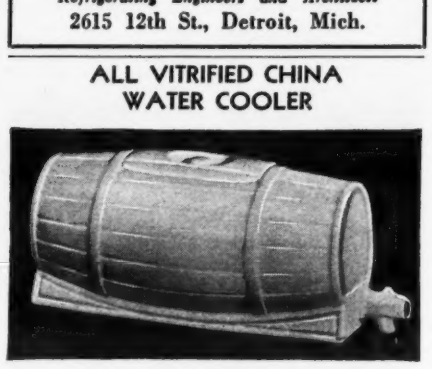
For complete details, ask for Bulletin 167 describing Wagner small motors.

Wagner Electric Corporation
6400 Plymouth Avenue, Saint Louis, U.S.A.
S533-2A

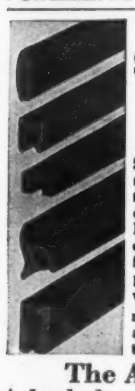
PATENTS
Searches, Reports, Opinions by a Specialist in REFRIGERATION
H. R. VAN DEVENTER
Solicitor of Patents - Refrigeration Engineer
342 MADISON AVE. NEW YORK

Testing Laboratory
For refrigerators
and refrigerating equipment
George B. Bright Co.
Refrigerating Engineers and Architects
2615 12th St., Detroit, Mich.

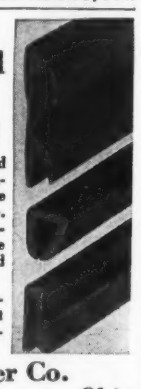
ALL VITRIFIED CHINA
WATER COOLER



BARREL SHAPE
FITS ANY REFRIGERATOR
No. 754 with all china faucet and chromium push button. Very rapid flow non-leak faucet. Overall dimensions 13½" long x 5½" wide x 5¾" high. Capacity 1 gallon. A necessary accessory for every refrigerator.
MAKES AN EXCELLENT SALES STIMULATOR
When used as an added inducement for an immediate purchase or as a gift for a list of prospects or for a purchase it certainly gets action. Write now for sample and prices.
PORCELIER MFG. CO. GREENSBURG, PA.



Sealing Strips and Glass Channels
Soft rubber tubed sealing strip. Continuous length. Fine quality, long life. In standard or special shapes. Write for samples and prices.
We can also furnish other important accessories for electric refrigerators.



The Aetna Rubber Co.
Ashtabula Ohio

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Artic
REG. U.S. PAT. OFF.
(R & H Methyl Chloride)
The IDEAL Refrigerant
56 pages, with charts and illustrations. Contains information on
- Specifications and Tests
- Physical Properties
- Effect on Materials
- Refrigeration Properties
- Thermal and Density Data
- Refrigeration Uses
- Handling and Servicing
- Leak Detection
- Containers, Traffic Regulations
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Equipment Manufacturers & Service Men:
Write for a free copy today!
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KELVINATOR INSTALLED IN SACRED HEART HOSPITAL

EAU CLAIRE, Wis.—Kelvinator refrigeration equipment has been installed in the Sacred Heart hospital by the Northern States Power Co. The sale, which includes equipment for a large Downing walk-in cooler as well as a 23-cu. ft. and three 9-cu. ft. deluxe models was made by R. J. Keith, assisted by S. L. Hagen, sales manager of the Wisconsin division of the power company.

The Downing cooler is equipped with two Kelvinator XO-101 cooling units and a WFB340 condensing unit. The large 230-cu. ft. deluxe cabinet is installed in the main diet kitchen, while the three 90-cu. ft. cabinets were placed in the serving kitchens on the first, second, and third floors.

The Northern States Power Co., now in the midst of its spring "Bust the Bulb" campaign which is to last eight weeks, sold more than 50 per cent of quota in the first three weeks.

Business Prepares to Use New Plans To Make Sales, Blood Writes

DETROIT—America is entering a new business era, and while the present period is not one of prosperity, it is certainly one of progress, says Maj. Howard E. Blood, president of Norge Corp., in a recent issue of *Executives Service Bulletin*.

Never in history, says Mr. Blood, has American industry progressed so far as it did in 1932, third year of the depression. And now, although the country is still economically stagnant, companies are preparing to launch activities adapted to new conditions.

"General management is back at its desk with its sleeves rolled up," he says, "burrowing into details that never before concerned it. Company presidents are . . . getting an understanding of consumer and dealer slants that never used to interest them.

"Each individual company must adjust itself to the new decade, not merely to the depression. Almost every economic consideration has reversed itself."

Pointing out the differences between past and present business periods, Mr. Blood says: "Then, it was a matter of manufacturing what could be easily sold, while today it is a matter of selling what can be easily manufactured.

"Then, the public bought merchandise for money, while now the public sells money for merchandise. Then, the manufacturer held the balance of power, while during the next decade the consumer and dealer will run the show.

"Desires have outstripped purchasing power. Markets have become saturated. Volume must be won away from competition where once there was more than enough room for all."

Declaring that business in general must be willing to forsake traditional concepts, and alert in adapting itself to new conditions, Mr. Blood says:

"Although valuable in demonstrating 'what not to do,' experience is a poor teacher of 'what to do' in plotting a successful advance in conditions like these. Management must resort to logical analysis more than to precedent.

"There never was a time when right executive thinking was so necessary. It must be individual thinking, too. The past decade encouraged group management control."

But "group thinking in this crisis stultifies activity, confuses responsibility, and saps that individual fervor so necessary to any great advance."

Then this: "A new type of management will be required in this new business era—one that realizes the responsibility begins rather than ends when the goods reach the shipping platform.

"Such management will concern itself primarily with the manufacture of customers rather than the manufacture of the product alone. It will bring the engineering department closer to the consumer . . . It will bring the sales department closer to distributive factors.

"It would seem to be of crucial importance," says Norge's president, "for such management to become more skillful in handling the human factor. A company's destiny depends upon how dealers and salesmen are motivated.

"Men are ruled by emotions more than logic, by feelings more than statistics. A keen understanding of human beings will permit management to secure unusual results from an otherwise indifferent dealer organization."

Export of Refrigerators

January, 1933, Shipments Reported by the Bureau of Foreign and Domestic Commerce, Washington, D. C.

	Electric Household Refrigerators Number	Value	Electric Commercial Refrigerators Up to 1 Ton Number	Value	Parts for Electric Refrigerators Value
Austria	6	309	...	...	$ 74
Belgium	82	$ 6,418	47	$ 4,686	6,861
Czechoslovakia	...	...	...	...	27
Denmark	...	...	...	...	1,063
France	41	4,274	15	1,785	4,207
Germany	27	1,480	15	1,013	3,245
Irish Free State	...	...	20	2,272	...
Italy	5	541	4	349	1,340
Netherlands	39	3,996	14	1,595	2,394
Norway	3	193	...	...	90
Poland and Danzig	6	482	...	...	148
Portugal	3	462	...	...	...
Spain	1	57	6	842	421
Sweden	6	340	8	726	1,012
Switzerland	8	287	13	1,290	4,754
United Kingdom	233	6,826	14	1,604	14,498
Yugoslavia	13	1,642	...	...	...
Canada	24	1,975	5	521	5,950
British Honduras	2	215	...	...	23
Costa Rica	1	98	...	...	137
Guatemala	...	...	...	...	8
Honduras	...	...	...	...	36
Nicaragua	2	229	...	...	...
Panama	144	13,382	3	1,283	594
Mexico	25	2,201	1	100	643
Bermudas	3	284	...	...	159
Barbados	7	748	...	...	134
Jamaica	6	910	...	...	28
Trinidad and Tobago	...	...	...	...	80
Other British West Indies	10	842	...	...	...
Cuba	7	495	...	...	1,079
Dominican Republic	6	721	1	140	...
Netherland West Indies	12	1,364	1	293	156
French West Indies	2	192	...	...	...
Haiti, Republic of	4	447	...	...	25
Virgin Islands of U. S.	8	964	...	...	187
Argentina	180	11,752	3	563	3,445
Brazil	370	35,785	3	496	3,289
Chile	...	...	...	...	8
Colombia	12	1,380	1	178	169
Eucador	3	403	...	...	...
Surinam	...	...	...	...	28
Peru	21	1,589	...	...	146
Uruguay	9	829	2	202	300
Venezuela	16	1,073	10	1,268	33
British India	96	8,348	14	1,926	8,463
British Malaya	21	2,257	...	...	157
Ceylon	...	...	1	212	93
China	22	2,141	4	651	38
Netherland East Indies	49	5,305	14	3,851	688
French Indo-China	...	...	...	...	61
Hong Kong	29	3,533	...	...	96
Japan	9	847	3	670	357
Palestine	...	...	2	776	...
Philippine Islands	61	5,594	12	2,424	1,099
Siam	10	1,044	...	...	...
Turkey	2	164	...	...	76
Australia	...	...	...	...	426
New Zealand	...	...	...	...	311
Belgian Congo	1	108	...	...	...
British East Africa	2	148	...	...	...
Union of South Africa	215	19,919	1	289	3,746
Gold Coast	...	...	...	...	49
Nigeria	6	398	...	...	32
Other British West Africa	3	316	...	...	14
Egypt	1	271	...	...	695
Algeria and Tunisia	1	76	1	86	84
Madagascar	...	...	...	...	70
Other French Africa	2	209	...	...	66
Morocco	7	482	2	219	841
Mozambique	6	678	...	...	...
Other Spanish Africa	...	...	...	...	118
Total	1,890	$157,023	240	$ 32,310	$ 74,371
Shipments to Hawaii	188	$ 17,203	37	$ 5,279	$ 4,090
Puerto Rico	49	$ 6,540	3	$ 419	$ 1,522

Leonard Plans to Sell Units to 'Leonards'

DETROIT—A number of Leonard dealers and distributors have embarked on a sales campaign by contacting families bearing the Leonard name with a special presentation of the features of the Leonard line.

An individualized letter is being sent to families in their territories bearing the name "Leonard" calling attention to the fact that only a few families of the 29,000,000 in the country can own an electric refrigerator bearing their own name. From this introduction the presentation describes the 1933 line of Leonard refrigerators.

The plan originated with the E. B. Latham & Co., New York distributor, where it met with a considerable degree of success, according to Merchandising Director A. M. Taylor of the Leonard Refrigerator Co.

Board Cancels Order After Hearing New Presentation

NEW ORLEANS—When Commercial Supervisor James Crary of Frigidaire Sales Corp., distributor here, found that board members of New Orleans' new nine-story Charity Hospital already had placed an order for refrigeration equipment for the structure's water-cooling system, he went before the board and asked to give his own sales presentation.

When he had finished, the board cancelled its original order, and signed with Mr. Crary for two A-5150 compressors, one A-250 compressor, two T-500 tanks, and two T-800 tanks.

RAFF HEADS CONNECTICUT MAYFLOWER CONCERN

HARTFORD, Conn.—Mayflower refrigeration is now being distributed in Connecticut and parts of several adjoining states through the Mayflower Sales Co., Inc., 175 Ann St.

Officers of the company are: F. J. Raff, president; N. B. Francis, treasurer; and Judge A. W. Creedon, secretary.

800 ATTEND BUREAU MEETING IN BOSTON

BOSTON—More than 800 executives and salesmen and of local refrigeration distributing and dealer organizations and central stations attended the meeting of the refrigeration section of the Metropolitan Electrical League held at the Boston Chamber of Commerce here April 6.

The meeting was sponsored by the executive committee of the refrigeration section consisting of the following distributors: H. Vaughan (Mayflower), chairman; H. Troutwine (Kelvinator); J. Pfeil (Frigidaire); W. L. Thompson (General Electric); J. W. Scott (Westinghouse); and J. Waddell (Norge).

Speakers at the meeting included Dr. G. W. Allison, field manager of the National Electric Refrigeration Bureau; Leavitt L. Edgar, vice president of the Boston Edison Co. and New England regional director for the bureau; J. J. Caddigan, assistant superintendent of the merchandising department of the Edison Electric Illuminating Co. of Boston; Distributor J. W. Scott; and Miss Emma Tighe, home economist.

An innovation in the way of entertainment at this meeting was the "sales singing contest." Each of the various distributor's organizations was given the opportunity to sing two of its fighting sales songs. The winner, the forces of W. L. Thompson, General Electric distributor, was presented with a silver loving cut donated by the league.

ELECTROLUX TIES IN WITH CHARITY BRIDGE CONTEST

CEDAR RAPIDS, Iowa—A. L. McKinstry, sales manager of the Cedar Rapids Gas Co., used a charity bridge tourney to bring public attention to Electrolux refrigeration recently.

When the Junior Service League and a local newspaper announced a charity bridge tournament to raise money for the city's under-nourished children, Mr. McKinstry donated an Electrolux refrigerator as the grand prize.

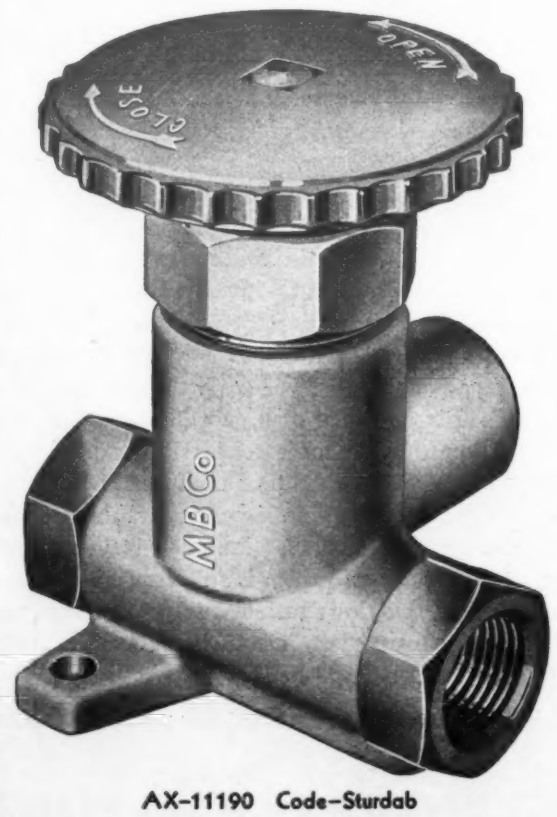
As philanthropic bridge fans entered the Montrose hotel for the matches, they saw an Electrolux surrounded by explanatory placards. As they sat down for their game, they read across the top of their score pads "Serve frozen delicacies at your next party—Electrolux automatic refrigeration."

And at the close of the tournament, all players were served with desserts prepared in Electrolux refrigerators.

DELANO RETURNS FROM WESTERN TOUR

GREENVILLE, Mich.—F. A. Delano, assistant to the vice president of Gibson Electric Refrigerator Corp., returned to the factory last week from the West where he has been franchising distributors and key dealers. His tour included Kansas City, Denver, Salt Lake City, and Omaha.

THE NEW MUELLER DOUBLE-PACKED OPERATING VALVE FOR HEAVY DUTY



AX-11190 Code—Sturdab

This valve is the answer to the need for an extra sturdy valve for large commercial installations and for air-conditioning work.

Its openings are full flow, assuring unrestricted passage of the refrigerant up to and including 3/4" O. D. diameter tubing.

It is double-packed and incorporates the back-seating feature. The body, which is extra heavy, and the indexed hand wheel are of forged brass; the stem is of Tuf-Stuf, a corrosion resisting alloy of great strength. The mounting plate is integral with the body.

The packing is not affected by heat or any other of the refrigerants in general use and may be replaced with the valve under pressure without loss of refrigerant or interruption of service.

Note—Mueller AX-11190 is one of the new line of full flow valves, fully described and illustrated in our new catalog. Send for your copy.

Mueller Brass Co.
PORT HURON, MICHIGAN

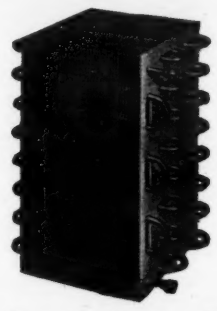
Mueller Brass Co. Valves and Fittings are approved by the Underwriters' Laboratories of Chicago

We manufacture a complete line of valves and fittings and can supply your every requirement

McCORD
REFRIGERATION
PRODUCTS
▼ ▼
Commercial Evaporators
Domestic Evaporators
Condensers
McCord Ice Trays
Spiral Finned Tubing
Spiral Copper Finned Iron,
Steel or Copper Pipe
▲ ▲
McCORD
RADIATOR &
MFG. CO.
DETROIT - - MICH.

BUYER'S GUIDE

A NEW FIN COIL *by* PEERLESS



Wedge-locked and edge-locked aluminum fins on tinned copper tubing for methyl chloride, sulphur dioxide, F-12, etc.,—aluminum tubing for ammonia.

Absolute Metal to Metal Contact.

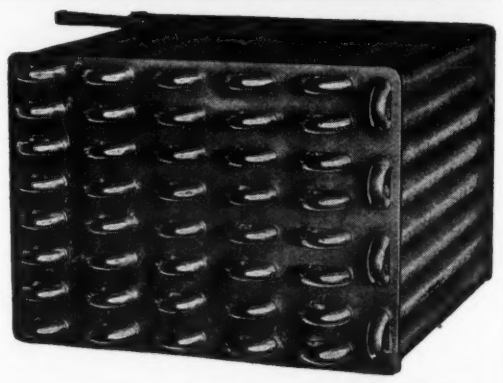
A Superior Coil in which Soldered Return Bends have been eliminated.

Priced to meet 1933 conditions.

Write—Wire for Catalog.

PEERLESS ICE MACHINE CO., 515 W. 35th St., Chicago, Ill.

ROME EVAPORATORS



Highest Efficiency
With Smallest Number
of Joints

Rome-Turney Radiator Co.
Rome, N.Y.

Makers of Rome Condensers and Helical Finned Tubing

REFRIGERATION SUPPLIES

MELCO BRAND

Save money, time and work—
Buy everything from one source

We carry a complete stock of
EVERYTHING IN REFRIGERATION
including

MELCO BRAND

BEER COOLING EQUIPMENT

MELCHIOR, ARMSTRONG, DESSAU CO.

116 BROAD ST. NEW YORK
1135 CALLOWHILL ST. PHILADELPHIA
STATLER BUILDING BOSTON

EXTRA HEAVY FORGED FLARE NUTS

¼"—3.30 per c ⅜"—4.50 per c ½"—5.80 per c
For Mixed Lots of 100 Add 5 Per Cent

COPPER REFRIGERATION TUBING
20' — 50' — 100' Lengths

Size	Length Per Lb.	1 to 24 Lb.	Price Per Ft.	25 to 49 Lbs.	Price Per Ft.
¼"	11 ft.	34 c	3¼c	28	2¾
⅜"	7 ft.	33 c	5c	27	4
½"	5 ft.	32 c	6½c	26	5¼

REFRIGERATION OIL
$1.50 per Gallon
Free From Moisture—Sludge—Acid

REFRIGERATION GASES
Ammonia, Carbon Dioxide, Ethyl Chloride, Isobutane, Methyl Chloride, Sulphur Dioxide.

All Other Sizes Available. All Prices Subject to Change Without Notice.

ICELESS REFRIGERATION ACCESSORIES COMPANY
2401-15 Chestnut Street Philadelphia, Penna.

For Every Job

of handling refrigerators.

X-70 REFRIGERATOR TRUCKS fit all cabinets, with or without legs, or in the crate, eliminate one man on delivery and prevent damage to cabinet, floor or walls. Sturdy all-steel frame, 4" rubber tired wheels, one truck with top casters and handles for tilting and rolling into delivery truck and on stairs. Only pads touch cabinet. Complete set $34.50. Ball bearing swivel casters on one end $5 extra.

We also manufacture the new Balance Truck.

SELF-LIFTING PIANO TRUCK CO. FINDLAY, OHIO
Manufacturers of Trucks for 33 Years

KRAMER REFRIGERATION PRODUCTS

ALL-COPPER COMMERCIAL EVAPORATORS
"Hot-Dip" thermal bond between every fin and every tube

DOMESTIC EVAPORATORS
In 2, 3, 4 and 5 tray sizes with Chrome or Porcelain Cover Plates

CONDENSERS for HIGH SIDES

TRENTON AUTO RADIATOR WORKS

241 W. 68th St. New York, N.Y.
TRENTON, NEW JERSEY
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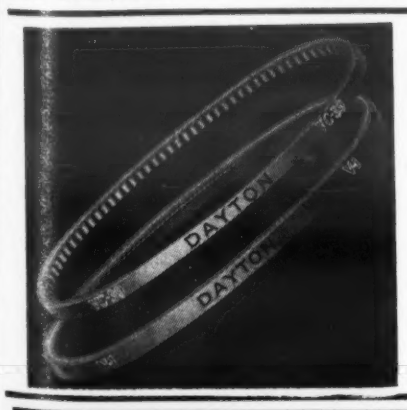


Dayton V-Belts

For all makes and types of refrigerators. There is a stock near you. Ask for price list and name of your nearest distributor.

THE DAYTON RUBBER MFG. CO.
Dayton, Ohio
The World's Largest Manufacturer of V-Belts

DETROIT LUBRICATOR COMPANY
TRUMBULL, LINCOLN, MARQUETTE & VIADUCT
DETROIT, MICH.

Manufacturers of "Genuine Detroit" Automatic and Thermostatic Expansion Valves, American Cubemakers, American Refrigeration Sections, Automatic Controls for Temperature and Pressure, Electric Valves for Refrigerant and Water Control, Thermostats, Humidistats and complete controls for Air Conditioning.

Descriptive literature gladly sent upon request
Division of
AMERICAN RADIATOR & STANDARD SANITARY CORPORATION

QUESTIONS

Parts for Australia

No. 1148 (Manufacturer, Massachusetts)—"Our president, who is now in Australia, has just cabled us asking that we secure information and prices on the various parts required in the manufacture of electric refrigerators.

"We understand that he is in touch with an ice box manufacturer who is anxious to get into the electric refrigeration business in competition with firms handling complete refrigerators imported from the United States.

"Not only is the duty into Australia exceedingly high, but the present exchange value of Australian pounds is nearly 50 per cent lower than normal.

"Can you give us the names of manufacturers of the various component parts such as would be required? In the event of business relations being established, we are prepared to handle orders ourselves, and take care of shipment and payment."

Answer—Consult the REFRIGERATION DIRECTORY which classifies all makers of component parts for refrigerators.

Rubber Ice Cube Trays

No. 1149 (Distributor, California)—"I can't find any advertisements in your paper on rubber ice cube fillers for metal trays. I handle the Grunow refrigerator, and am desirous of purchasing rubber fillers for their shallow trays. If you can put me in touch with a manufacturer, or ask them to ship me a sample and quote prices at once, I will be obliged."

Answer—Get in touch with Inland Mfg. Co., 15 Coleman Ave., Dayton, Ohio.

Refrigerant Drums

No. 1150 (Distributor, Ohio)—"We would like to have the names and addresses of manufacturers of small steel bottles suitable for shipping the gas used in electric refrigerators."

Answer—Carbide & Carbon Chemical Corp., 30 E. 42nd St., New York, N. Y., and Prest-O-Lite Co., Inc., Indianapolis, Ind.

Statistical Data

No. 1151 (Distributor, North Caroline)—"We are preparing our 1933 electric refrigeration sales school, and would appreciate all available statistical information that you can give us such as sales from 1924 to the present time of both commercial and domestic refrigerators, the rating of the different manufacturers, saturation points, etc."

Answer—Get a copy of the REFRIGERATION DIRECTORY and MARKET DATA BOOK.

Electric Refrigerators on Farms

No. 1152 (Manufacturer, Ohio)—"We are interested in the use of electric refrigerators on farms in the United States, and would greatly appreciate any information you can supply as to the total number in use, or any references you can give which will enable up to look up such data for ourselves."

Replacement Parts in New York

No. 1153 (Washington, D. C.)—"We have an inquiry from our Havana office for names of jobbing houses handling repair parts for the various makes of household electric refrigerators. I am wondering if by chance you know of any such firms located in New York City."

Answer—Melchior, Armstrong & Dessau Co., 116 Broad St., New York, N. Y.

Refrigerator Accessories

No. 1154 (Distributor, Rhode Island)—"Will you kindly let us know what you have in the line of a directory of manufacturers of refrigerator accessories, such as water coolers, etc."

Answer—All known manufacturers of refrigerator accessories are listed on page 341 of the REFRIGERATION DIRECTORY and MARKET DATA BOOK.

Hardware for Spanish Firm

No. 1155 (Exporter, New York)—"We have a client in Spain who wishes to purchase electric refrigerator hardware such as latches, hinges, etc. Can you give us names of some suppliers of that type of merchandise? Our client naturally wants chrome-plated articles of good quality, as he is a Spanish manufacturer of electric refrigerators."

Answer—Grand Rapids Brass Co., 90 Scribner Ave., N. W., Grand Rapids, Mich.; Kason Hardware Corp., 61 Navy St., Brooklyn, N. Y.; and Winters & Crampton Mfg. Co., Grandville, Mich.

Glass Dishes

No. 1156 (Distributor, New Mexico)—"Kindly let us know the name and address of a manufacturer of frosted glass refrigerator dishes."

Answer — Corning Glass Works, Corning, N. Y.

Commercial Evaporators

No. 1157 (Manufacturer, Ohio)—"Will you please advise us where we can get in touch with manufacturers of finned coil evaporators for use with brine."

Answer—A complete list of makers of commercial evaporators is published in the REFRIGERATION DIRECTORY, beginning on page 223.

Weir Wheelock's Address

No. 1158 (Distributor, New York)—"We are interested in located Weir, Wheelock Co., Inc., manufacturer of refrigerator cabinets, and thought possibly you are in a position to give us their present address."

Artificial Foods for Display

No. 1159 (Distributor, California)—"We shall appreciate your advising us the names and addresses of a few manufacturers of display fruits, meats, etc."

Answer—Artificial Food Co., 1675 W. 11th St., Los Angeles, Calif.; Imitation Food Products Co., 107 Lawrence St., Brooklyn, N. Y.; Realistic Displays, Inc., 122 Coit St., Irvington, N. J.; and Reproductions Co., 210 South St., Boston, Mass.

Kerosene-Operated Refrigerators

No. 1160 (Exporter, New York)—"We have a request from our home office for information regarding kerosene-operated refrigerators. They advise us that there is a machine manufactured under the name 'Disvoer', about which we will appreciate full information.

"Otherwise will you kindly send us names and addresses of the various firms in the United States making kerosene-operated refrigerators."

Answer—The trade-name "Disvoer" is entirely new to us. However, these two companies make a kerosene-operated refrigerator: Gibson Electric Refrigerator Corp., Greenville, Mich., and Perfection Stove Co., 7609 Platt Ave., Cleveland, Ohio.

Soda Fountains

No. 1161 (Distributor, New York)—"Will you please advise us names and addresses of soda fountain manufacturers."

Answer—A complete list of soda fountain makers appears in the REFRIGERATION DIRECTORY, beginning on page 359.

Beer Bottle Coolers

No. 1162 (Distributor, Indiana)—"Please wire collect the names of reliable companies manufacturing refrigerated coolers for bottled beer."

Answer — Consolidated Equipment Sales Corp., Grand Rapids, Mich.; Esco Cabinet Co., 140 E. Market St., West Chester, Pa.; Fedders Mfg. Co., 57 Tonawanda St., Buffalo, N. Y.; Ferris Cooler Works, Clarinda, Iowa; Gertner Mfg. Co., Cincinnati, Ohio; Glascock Bros. Mfg. Co., Muncie, Ind.; Kelvinator Corp., Detroit, Mich.; Rudolph Wurlitzer Mfg. Co., North Tonawanda, N. Y.

Financial Statements

Montgomery Ward & Co.

CHICAGO—For the 13-month period ending Jan. 31, 1933, Montgomery Ward & Co. reports a loss of $5,687,000. Sales for that period totaled $176,489,000. During the 13 months which ended Jan. 31, 1932, the company's sales amounted to $210,946,000, and its loss was $9,737,000.

Bohn Aluminum & Brass Corp.

DETROIT—Charles B. Bohn, president of Bohn Aluminum and Brass Corp., told stockholders at the annual meeting that he estimates earnings for the current quarter at around $75,000.

Deep Sea Survey Yacht Kelvinator Equipped

NORFOLK, Va.—Dix-Bowers Co., Kelvinator distributor here, has equipped the "Oceanographer," deep sea survey yacht of the U. S. Coast and Geodetic Survey Service with Kelvinator refrigeration.

This vessel, once known in the ports of the world as John Pierpont Morgan's "Corsair II," was sold by her multi-millionaire owner to the U. S. government for one dollar. Lavish furnishings have been removed and in their place has been installed elaborate equipment for deep sea and shoal water surveying work.

Four condensing units were installed, to serve food storage and ice making needs as well as water-cooling equipment.

CLASSIFIED

PAYMENT in advance is required for advertising in this column.

RATES: Fifty words or less, one insertion $2.00, additional words four cents each. Three insertions $5.00, additional words ten cents each.

INDEPENDENT SERVICE COMPANIES

MANUFACTURERS are constantly inquiring for reliable local service organizations prepared to handle installation and maintenance work in communities not served by their regular distributors and dealers. Your business card in this column will bring this profitable business direct to you. Special low rates are now offered to independent service men. For only $10.00 you may carry a 4-line advertisement for three months. Ask for details. Address Electric Refrigeration News.

MISCELLANEOUS

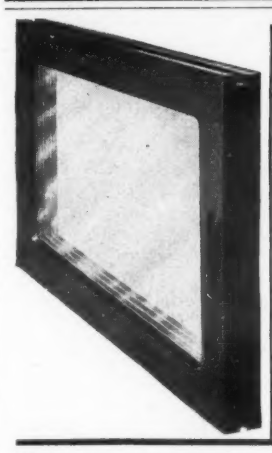
SEND one dollar in cash, stamps, or P.O. money order for 17 week's trial subscription to Electric Refrigeration News and keep informed regarding important developments in the industry.

Equipment Wanted

In market for several hundred completely assembled refrigerators. Will pay cash. Furnish full particulars to

Electric Refrigeration Sales Co.
515 So. Fairfax Ave. Los Angeles, Calif.

WANTED
Electric Refrigerators
used or new
write or wire complete details
used Washing Machines Bought new
London-Berke Company
S. W. cor. 5th & Girard Ave., Philadelphia, Pa.



ACE HARD RUBBER DOOR FRAMES
for Refrigerated Display Cabinets

- Molded in one piece. No joints or seams to catch dirt and grease. The use of a reinforcing, laminated, plywood core sealed by vulcanization entirely within the hard rubber prevents warping.

Complete catalogue and prices on request

AMERICAN HARD RUBBER COMPANY
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Akron, Ohio—111 West Washington Street, Chicago, Illinois

Time Tested . . .

THE test of time is a severe one, and those organizations that have achieved success through the years have earned the reputation of

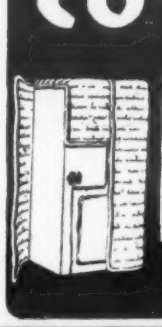
Proven Ability

only through sincere effort in the right direction.

Our Seventh Successful Year

UTILITIES ENGINEERING INSTITUTE
Wells at Kinzie Street, Chicago
Complete and practical refrigeration training by extension methods

Fulton Adjustable REFRIGERATOR COVERS



Fit any size refrigerator! Big saving over old styles! Easy to adjust—more convenient! Made of strong, durable green drill—flannel lining and non-lump filler. Write for prices today!

Fulton Bag & Cotton Mills

A good product sold at 1933 prices by a profitable distributor policy should interest you.

BRUNNER MANUFACTURING CO. UTICA, N. Y.

BRUNNER
REFRIGERATING EQUIPMENT